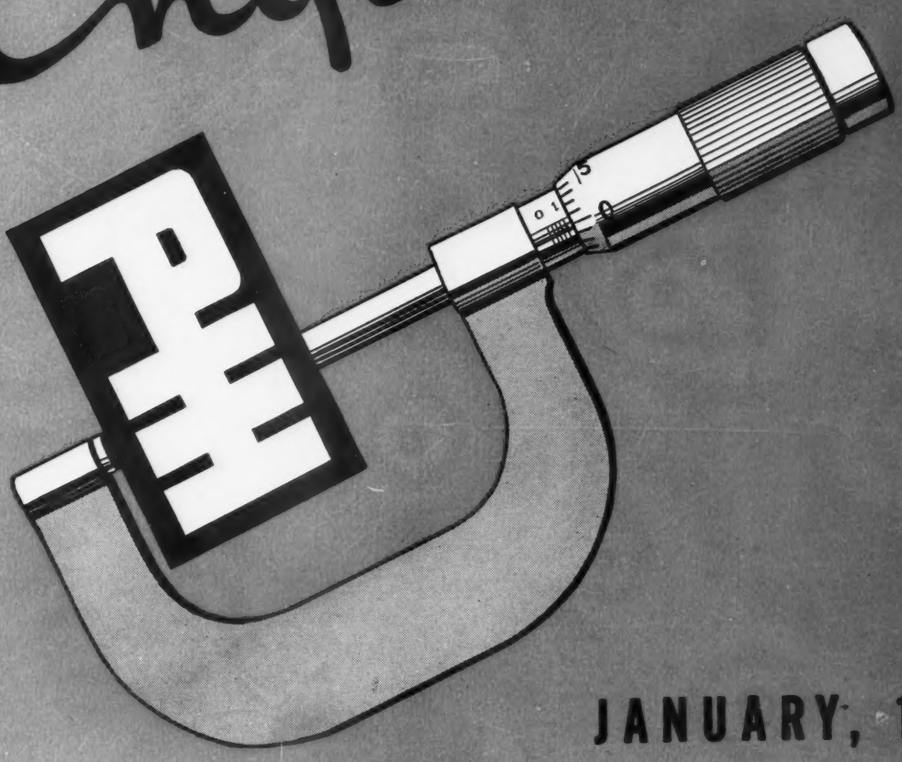
Printing Equipment Engineer



JANUARY, 1940

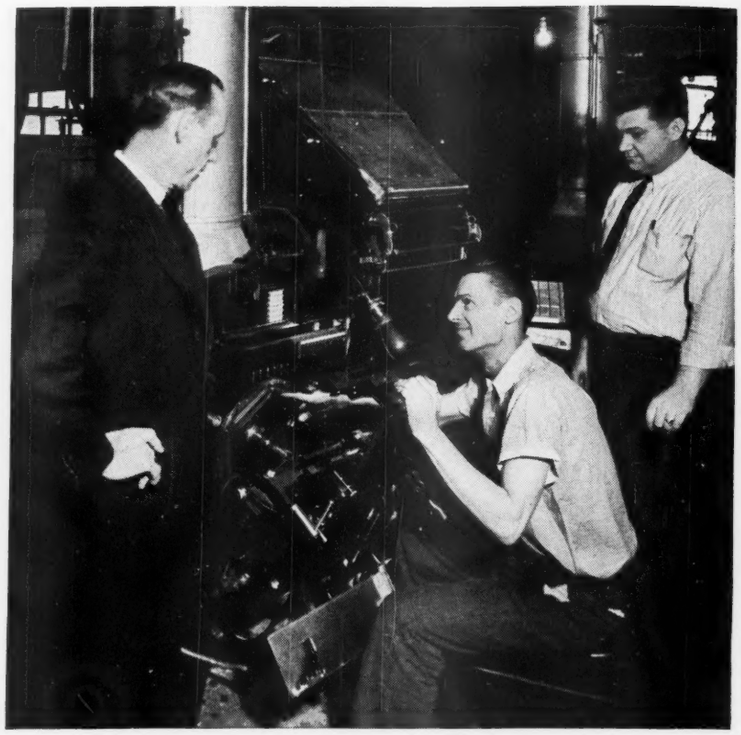
A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

MEN FROM MISSOURI

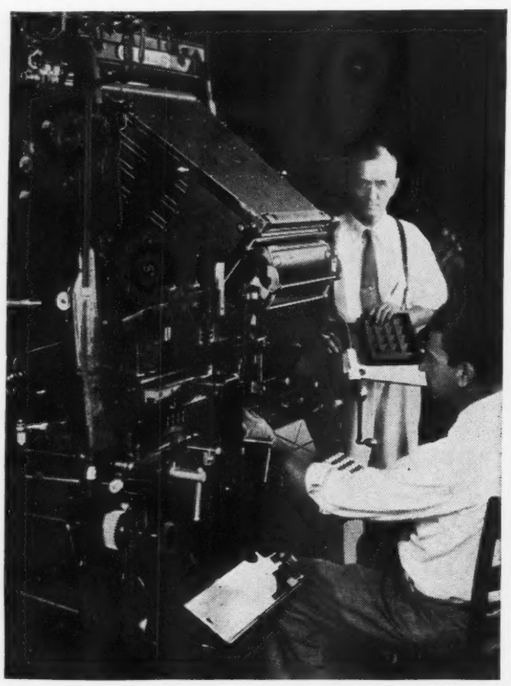
—they had to be shown

But these men know efficient performance when they do see it. That's why they're so enthusiastic about their new Blue Streaks.

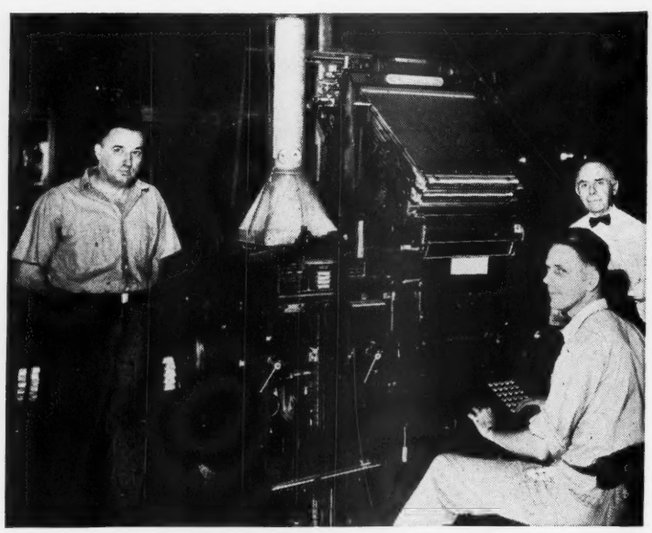
TRADE **LINOTYPE** MARK



ST. LOUIS REPEAT—The Von Hoffmann Press has now installed its second Model 29 Mixer Linotype. Why? Because they liked the first one! Machinist John Harashe (in chair) points out some special reasons, has reached the sturdy Six-Mold Disk. General superintendent Henry J. Eickmann (left) says that those mechanical advantages account for the important result... greater production. Composing-room foreman Eddie Amass agrees.



THREE OTHERS—This model 29 is just one of the four Blue Streak Linotypes which E. W. Stephens Publishing Company of Columbia, Missouri has installed while carrying out a plan to keep their composing-room in step with the times. The plant was founded in 1870. Superintendent is Homer Crosswhite (by sorts tray). Fred Heisler is at the keyboard.



AND ANOTHER St. Louis repeat at the Concordia Publishing House! In September 1938 they installed a Model 29 Mixer; in September 1939 they repeated the order. (We're looking forward to next September.) Grouped at second Model 29 are machinist Fred Herzberger, operator Harold Kelpe, and composing-room superintendent Charles Simon. Eleven Linotypes are now helping to produce a great volume of high-grade work in this modern plant.

Linotype Erbar Bold Condensed,
Gothic No. 16 and Caledonia

PREMIER

ROTARY SHAVER

THE 3 WAY
WONDER
MACHINE

1 YOU GET THE CORRECT ROTARY SHAVING PRINCIPLE IN PREMIER.

2 YOU GET SPEED OF PRODUCTION WITH PREMIER—IT'S IN THE DESIGN.

3 YOU SAFEGUARD ACCURACY WITH PREMIER—SHAVES AT DIAL SETTINGS.

STAHI
CORPORATION
1020 CROCKER STREET
LOS ANGELES, CALIF.

Matrix Library Handling Simplified

By W. R. CRAFT*

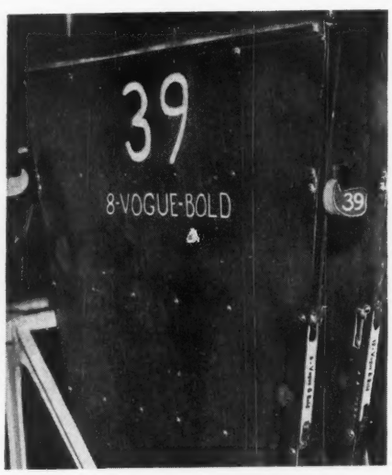
**The Thomas & Carlstrom Typesetting Co., Cleveland, O.*

IN the printing and typesetting business idle time can be put to good use, so that when the sun shines again and the ledger looks blacker than red, the ever-present rush work can move more smoothly. I undertook the job a year ago of reorganizing the line-composing machine department in The Thomas & Carlstrom Typesetting Co.'s composing room. The reorganizing was all done on what we call "standing time" or idle time.

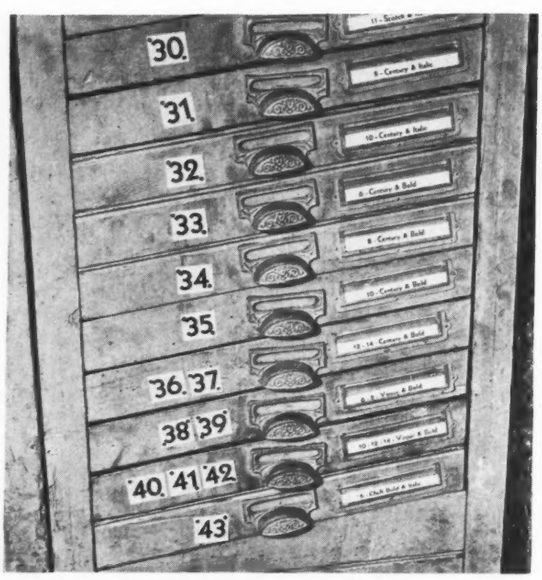
When one considers that our plant has 80 fonts of matrices and thousands of dollars invested in sorts and accented characters, he can get some idea of the momentous job I cut out for myself. Suffice to say, I have just completed the job. I believe other composition and printing houses would be interested in the system I have installed in our plant. It is for that reason I am going to ask Mr. Mac Sinclair, editor of *Printing Equipment Engineer*, to pass this system on to others.

First, let's start with the magazines that contain the fonts. Each font was given a number of our own. For example, let's take the Intertype Vogue series. We have this series from 6 point to 14 point, inclusive. On the front of each magazine I had painted in white enamel the name of the font, *i. e.*, "6 Point Vogue." All our magazines are painted the same. Now, below that 6 point Vogue name is painted (also in white enamel), the number which corresponds to the number on the magazine rack. If 6 point Vogue is number 32, then the number painted on the edge of the magazine rack will also be 32.

Now, let's go over to the matrix cabinet where we keep our thousands of sorts and odd characters. Right here I want to tell you that The Thomas & Carlstrom Typesetting Co. has so many of these it almost takes a bookkeeper to take care of them. On the front of each cabinet I have a label printed in 24 point Kabel bold on stiff white cardboard. This card is slid into a card-holder tacked to the front of each drawer. This label is at the right of the drawer pull-out handle. On the left of the handle I have the number of the magazine, which is also the number on the magazine and the number on the magazine rack. In other words, all three numbers are the same—32 on the magazine, 32 on the magazine rack, and 32 on the matrix cabinet drawer. If you are an operator and you are going to set a Spanish job in 6 point Vogue, and you want to immediately find the accented character matrices, you simply look at the number of your magazine, go to No. 32 drawer, which I have had set in 24 point Kabel bold, and there can be no mistake.



This magazine, besides carrying face and point size, also carries font number.



Each drawer in sorts cabinet is numbered to correspond with font number on magazine.

In some large-city cafeterias the double check system is employed for computing food tickets. The first checker checks your food. All your dishes are tabulated on a machine resembling a large adding machine. The next girl checks your food and gives you your check. The cashier takes your money. There can be no mistake. Under my system in the composition composing room, there can be no mistakes. That was the fundamental reason for putting in this system. I call it "A check against one's self." On each side of the magazine printed in white cardboard in 24 point Kabel bold is the name of the font, on the side of the rack is the magazine number, on the magazine is painted the name of the font, below that is the number of the magazine rack, on the cabinet is the number that corresponds to the magazine and the magazine rack and also the name of the font. We never make a mistake in setting a job either wholly or partially in wrong face or with wrong fonts.

In the magazine cabinets, all the characters and fractions are separated. I took Monotype slugs (you can do the same with line slugs), and sawed them 3½ picas wide. I put one of these slugs between each different set of sorts. To make it more plain, say between each set of fractions, ½, ¼, ¾, etc., I put a slug. I did this also with all our foreign accents. When an operator goes to one of our matrix cabinets, he doesn't waste his eyesight or time fishing around for the character he wants. They are all in order and separated. When his job is completed, he puts the character back in the place from which he got it.

If the executive of every composition house would adopt this triple check system I am sure their composing rooms would be much more convenient places in which to work. Try it. By using your idle time in installing this system, you will save time in the end.

1940 Catalog

The South Bend Lathe Works, South Bend, Ind., has published a new 48-page catalog, illustrating and describing its complete line of 9 in. Workshop Back-Geared, Screw Cutting Lathes and Attachments. A copy of this Catalog No. 50 can be had free on request by writing to the company, attention of the Technical Service Department, and mentioning *Printing Equipment Engineer*.

Paper Trade Name Index published for the first time in the 1940 P-Double-E Reference Issue, contains 420 trade names of paper stocks and 99 names of companies manufacturing or dealing in those stocks.

Efficiency—Convenience

The New Ludlow Universal Matrix Cabinet

The new Ludlow Universal Matrix Cabinet will be of special interest to the newspaper composing room executive interested in the most efficient setting of Ludlow matrices in the larger point sizes, which are more and more being specified by advertisers and used by the modern newspaper for display and for headlines. The substantially-built 20-case steel universal matrix cabinet can be provided with cases for either 1¼-inch or ⅞-inch matrices, or for both. In these cases, all the matrices lie and stack in the boxes in the regular crosswise position.

The 1¼-inch matrices rest and slide on special brass-topped vertical partitions, which act as rails under the ears of the matrices. Universal cabinet cases for 1¼-inch matrices hold nearly twice as many matrices as the 1¼-inch standard cabinet cases. An extra matrix channel extends the full depth along the inner side of the universal cabinet 1¼-inch case. By inserting readily-removable cross-partitions, this channel may be divided into as many as eleven convenient boxes for advertising figures, superior figures, accents, or any other extra-character matrices.

Universal cabinet cases for ⅞-inch matrices have the regular wooden partitions, and each box holds approximately 70% more matrices than the corresponding box of the standard cabinet ⅞-inch case. Along the inner side of the case are 36 additional smaller boxes for extra-character matrices.

For italic-body matrices, angular filler-blocks are inserted in the boxes of universal cabinet cases. These italic filler-blocks may be easily removed if it should be desired to use the case for roman matrices.

Many new features have been incorporated in the new Ludlow universal matrix cabinet and cases, including roller-bearing case slides, combination case-handle and label-holder, and other improvements. Unit space-trays, shown in use on the commodious working top of the universal cabinet in the illustration, accomodate a complete assortment of all spaces, quad blocks, and division quads for ⅞-inch and 1¼-inch matrices. A stick rack for holding ten Ludlow matrix sticks is located on the side of the cabinet.

An illustrated folder describing this cabinet in detail will be gladly sent on request.

- ★ Increased capacity 1¼-inch and ⅞-inch cases
- ★ Additional boxes for extra-character matrices
- ★ All matrices lie in the crosswise position
- ★ Roller-bearing case slides
- ★ Removable italic filler-blocks
- ★ Unit space-trays
- ★ Combination case-handle and label-holder
- ★ Stick rack for holding 10 matrix sticks

LUDLOW TYPOGRAPH COMPANY • 2032 Clybourn Avenue Chicago • • Illinois

Set in Ludlow Mandate and members of the Radiant family

CHALLENGE PAPER DRILLS will produce 200,000 to 600,000 holes per hour, depending on the kind of work and the model employed. That's real speed!

But that's not all. The important point is that Challenge Paper Drills will produce such huge volumes of work without sacrificing quality. Every hole is precisely positioned, clean cut, and in perfect alignment.

Easy operation, fast action drill heads, high-grade hollow drills, ball bearing spindles, super-speed gages, and simple adjustments account for this fast, accurate production.

Slotting and cornering attachments for all models widen their profit-range immensely.

Look over the complete Challenge line and select the machine that fits your needs. Mail coupon for catalog and information.

THE CHALLENGE MACHINERY CO.

GRAND HAVEN, MICHIGAN

CHICAGO
17-19 E. Hubbard St.

Challenge

NEW YORK
200 Hudson St.

Choose a Challenge
7 MODELS ... A SIZE AND STYLE FOR EVERY REQUIREMENT

Free **DRILL CATALOG**

Without obligation, send new illustrated catalog giving full details on the Challenge line of Paper Drilling Machines.

NAME _____

ADDRESS _____

A TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.

TECHNICAL BOOKS

- PHOTOGRAVURE — *By H. Mills Cartwright.* Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- TIPS ON PRESSWORK — *By C. C. Cooper.* This pocket size book measures 3½ in. by 5½ in. and contains 111 printed pages, heavy paper cover. Covers standard practices on cylinder and platen presses. Price $1.50, cash with order.
- FIFTH PRODUCTION YEAR BOOK — An encyclopedia or text book about all printing processes and production matters. Invaluable to the mechanical executive and production man. Lots of color. Bound in cloth, silver stamped, 424 pages, 8½ in. by 11¼ in. Price $5, cash with order.
- ENCYCLOPEDIA OF LITHOGRAPHY — *Compiled by Russell L. Miles.* Besides technical information about all details of offset-lith set forth in simple language, this book contains discussions on various phases of offset-lith by well known writers. Bound in blue cloth, gold stamping. Illustrated. Size 6 in. by 9¼ in., 212 pages. Price $4.50 per copy, cash with order.
- ETCH PROOFS — *By J. H. Bartz.* Booklet, approx. 6 in. by 9 in. 40 pages and paper cover. Tells reasons for and how to take reproduction proofs. Price, $2.00, cash with order.
- HANDBOOK FOR PRESSMEN — *By Fred W. Hoch.* Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts. [illegible] copy, cash with order.
- THE PRACTICE OF PRESSWORK — *By Craig R. Spicher.* We offer copies to our readers at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
- MANUAL OF STEREOTYPING — *By Joseph Goggin.* This 256-page book conveys latest technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.

Send All Orders With Remittance to

PRINTING EQUIPMENT Engineer

1276 W. Third Street
Cleveland, Ohio

PRINTING EQUIPMENT *Engineer*

LEADING ARTICLES
JANUARY, 1940

Matrix Library Handling Simplified 2
W. R. CRAFT

U. of C. Press's New Home 11

Jobs Created By Patented Inventions (Editorial) . . . 12

Glass Jar Storage for Composing Machine Parts . . . 14
GORDON F. ELROD

Centrifugal Force in Matrix Preparation 15
ROBERT D. BERRY

Fluorescent Lighting Application 17

Equipment and Supplies Developments 19

Automatic Register Control 24
W. L. JONES

Zero Was Below—A Windy Bill Story 26
L. H. HOUCK

Paper Problems 28
LETTER P. OFFGRAV

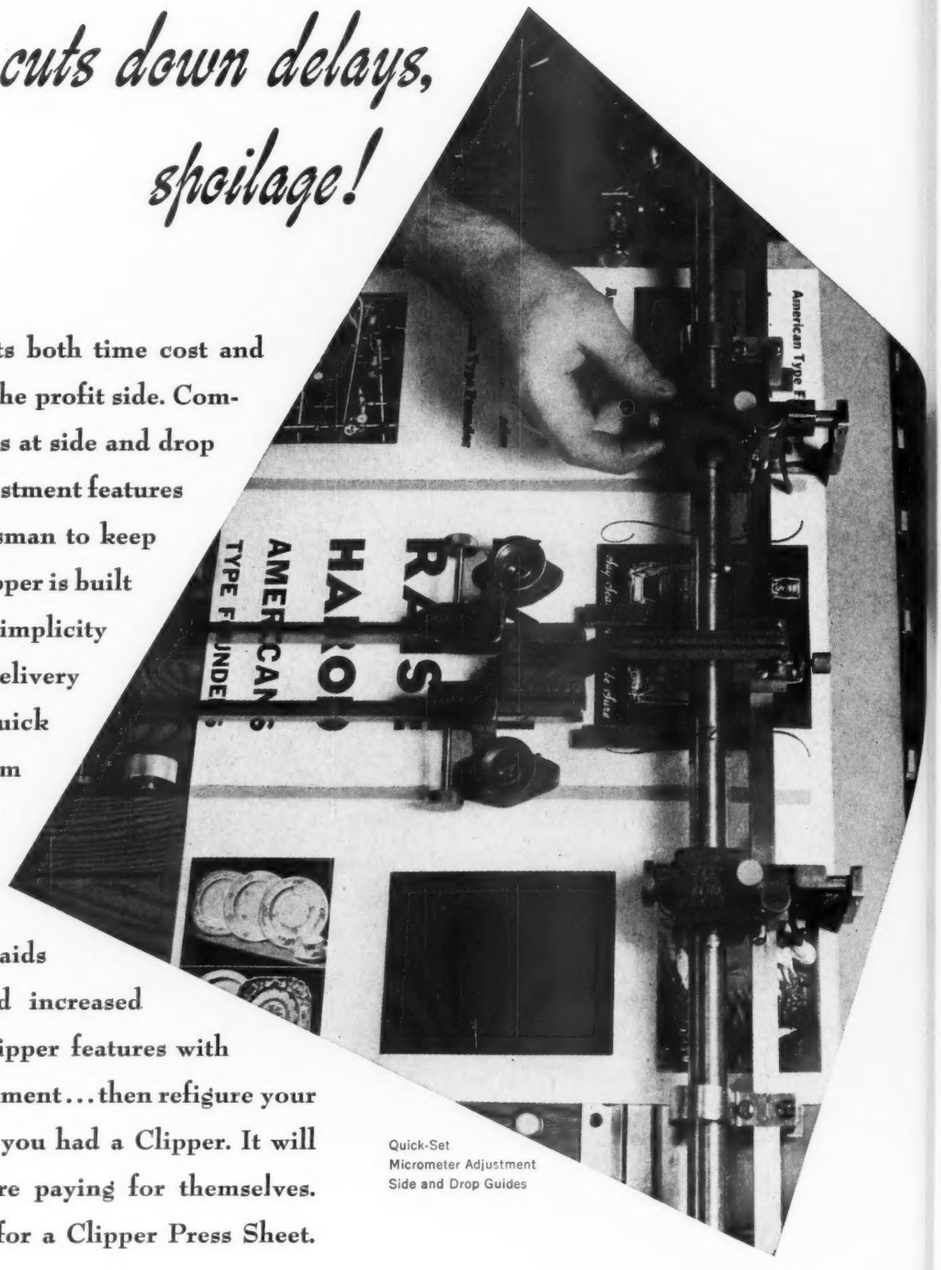
Recent Patents 31

Editorial Index for 1939 45

PRINTING EQUIPMENT *Engineer*, a monthly publication. Vol. 59, No. 4. Published at 1276 West Third St., Cleveland Ohio. Don Will, Publisher, MacD. Sinclair, Editor. Adam Henri Reiser, Associate Editor. H. P. Taylor, Advt. Manager. Eastern Manager: Russ Birchfield, 509 Fifth Ave., New York, N. Y.; phone VAnderbilt 6-0890. Western Manager: E. P. Bloomster, 232 East Erie St., Chicago; phone SUperior 2444. Copyright 1940 by The Willsea Pub. Co. Subscription price per year, $3.50 in advance in U. S. A. Single copy regular issues, 25c. December Reference Issue $1. June and August Issues, 50c each. Subscriptions in foreign countries, $4.50 in advance, U. S. currency. Printed in U.S.A.

Member Controlled CCA Circulation Audit

Simplicity of CLIPPER *features cuts down delays, spoilage!*



Quick-Set
Micrometer Adjustment
Side and Drop Guides

THE KELLY CLIPPER cuts both time cost and spoilage . . . keeps you on the profit side. Complete visibility of the sheets at side and drop guides, and the simple adjustment features make it easy for your pressman to keep the job in register. The Clipper is built for both accessibility and simplicity throughout. Swing-away delivery makes planing down and quick changes easy with the form on the bed. The Clipper's one-shot lubrication and its quick-set feeder are important quick get-away aids to speedy production and increased profits. Compare these Clipper features with those of your present equipment . . . then refigure your last four or five jobs as if you had a Clipper. It will show you why Clippers are paying for themselves. Ask your ATF Salesman for a Clipper Press Sheet.

American Type Founders

200 ELMORA AVENUE, ELIZABETH, N. J. *BRANCHES IN PRINCIPAL CITIES*

Types used: Grayda, Bernhard Modern Bold and Italic

MILES of SMILES

If you would enjoy Miles of Smiles, travel the Timken way! Choose trains that are Timken Bearing Equipped, because roller bearings make possible a new smoothness in riding comfort that is thoroughly delightful. ¶Timken Bearings are on most of America's newest streamliners and locomotives—both diesel and steam. ¶It's only a matter of time before all rolling stock—old and new—passenger, freight cars and locomotives—will be equipped with roller bearings, because Timken Bearings vastly increase comfort—vastly decrease costs—banish hot boxes—maintain schedules. ¶Such cost-cutting, business-getting equipment puts a song in the heart of any railroad operator. That means Miles and Miles of Smiles!

Tapered Roller TIMKEN BEARING EQUIPPED

NOTICE

Look for the trade-mark TIMKEN on every bearing, whether buying new equipment, or replacing a Timken Bearing in your automobile or truck, industrial or farm machinery. That trade-mark is your assurance of quality.

TIMKEN

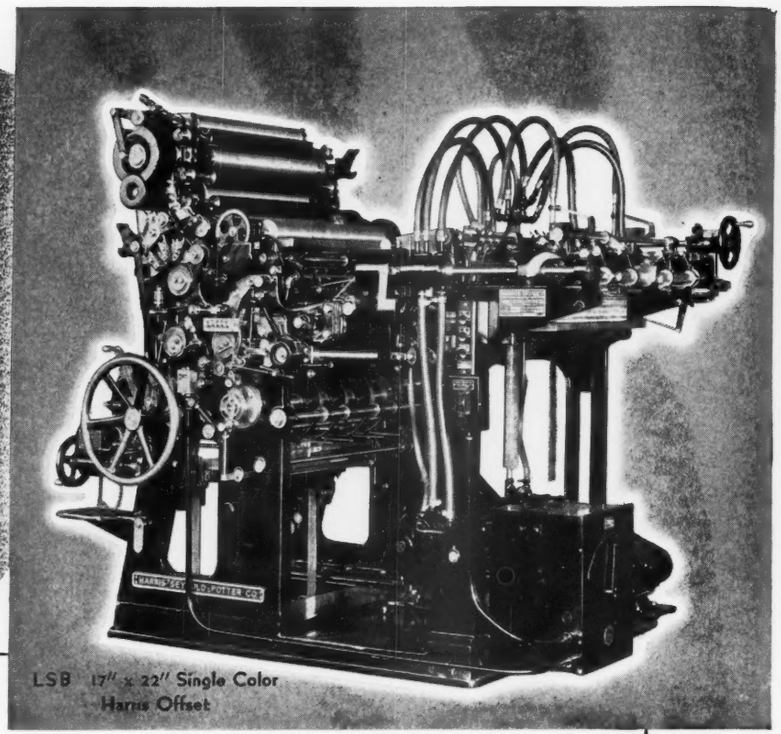
TAPERED ROLLER BEARINGS

THE TIMKEN ROLLER BEARING COMPANY
CANTON, OHIO

Copyright 1939 by The Timken Roller Bearing Company

THIS ADVERTISEMENT APPEARS IN THE SATURDAY EVENING POST FOR DECEMBER 30
MILES OF SMILES FOR EVERY MANUFACTURER AND USER OF TIMKEN BEARING EQUIPPED PRODUCTS

You Can Make Offset Profitable with this Press



LSB 17" x 22" Single Color Harris Offset

HARRIS *Performance* that reflects Craftsmanship

The only kind of modern Offset that brings profits into your plant is the kind your customer needs for his own profits.

That leading lithographers choose Harris Presses is not through accident. Harris Presses provide the means of producing the kind of modern Offset that adequately serves your customer's needs. Precision register, smooth running and sturdy mechanism, distribution of ink, stream feeding and long life—these are qualities that make Harris Performance the kind you need for profitable ownership.

LITHO *Chemicals* Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

HARRIS · SEYBOLD POTTER *Company*

Pioneer Builders of Successful Offset Equipment

General Offices: 4510 East 71st Street, Cleveland, Ohio • *Harris Sales Offices:* New York, 330 West 42nd Street; Chicago, 343 South Dearborn Street; Dayton, 819 Washington Street, Atlanta, (Harris • Seybold • Potter Service Corp.) 120 Spring Street, N. W , San Francisco, 420 Market Street • *Factories:* Cleveland, Dayton.

"TAYLOR, WE WON'T HAVE OUR CATALOG RUINED LIKE THAT"

Has this ever happened to you? Your friend, the printing buyer, takes your samples to show his boss, and gets this comment, "We won't have OUR catalog ruined by poor cutting."

Perhaps you have invested in expensive new press or folding equipment, and are trying to impress customers and prospects with your ability to turn out really fine jobs. How foolish it is, then, to risk your work and your reputation on an out-of-date cutting machine!

You will greatly strengthen your sales story, as well as guard your reputation, if you emphasize the fact that you cut and trim on modern, new Seybold equipment.

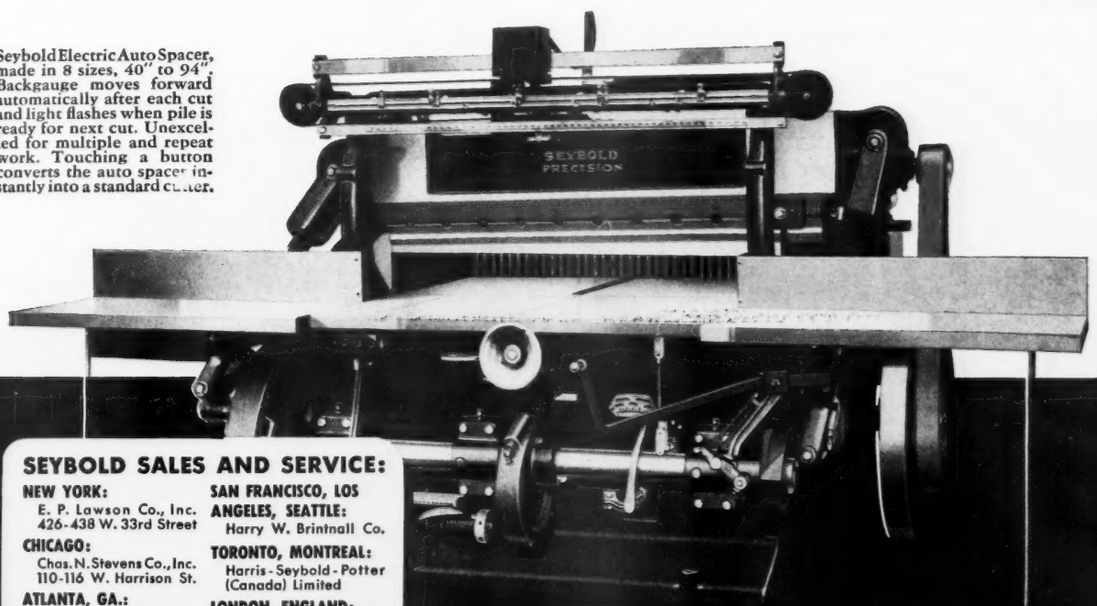
There are 10 specific points in which the 1940 Seybold excels the cutters of even ten years ago. Let our sales organization show you this point by point comparison and demonstrate how a new Seybold paper cutter can turn your cutting from a liability into a real sales asset.

SEYBOLD DIVISION, Harris • Seybold • Potter Co., Dayton, Ohio

CUTTERS FOR EVERY NEED

Small shop or large, you can get a new Seybold Cutter built to meet your exact needs. The complete line includes more than 30 models, ranging from the big 94" electric auto-spacers down to the economical 34" hand clamp cutter. Different size machines under power in our factory and sales agents' showrooms are always ready for demonstration.

Seybold Electric Auto Spacer, made in 8 sizes, 40" to 94". Backgauge moves forward automatically after each cut and light flashes when pile is ready for next cut. Unexcelled for multiple and repeat work. Touching a button converts the auto spacer instantly into a standard cutter.



SEYBOLD SALES AND SERVICE:

NEW YORK: E. P. Lawson Co., Inc. 426-438 W. 33rd Street

CHICAGO: Chas. N. Stevens Co., Inc. 110-116 W. Harrison St.

ATLANTA, GA.: Harris-Seybold Sales Corporation, 120 Spring St., N. W.

DAYTON: Central Sales District 819 Washington St.

SAN FRANCISCO, LOS ANGELES, SEATTLE: Harry W. Brintnall Co.

TORONTO, MONTREAL: Harris-Seybold-Potter (Canada) Limited

LONDON, ENGLAND: Smyth-Horne, Limited

LATIN AMERICA AND WEST INDIES: National Paper & Type Co., Inc.

SEYBOLD

SEYBOLD SETS THE STANDARDS BY WHICH OTHERS ARE JUDGED

PAPER CUTTERS • BOOK TRIMMERS • DIE PRESSES • KNIFE GRINDERS • DRILLS • WIRE STITCHERS

4 Facts *have dictated the purchase and use of Monotype Type-Setting and Type-Casting Machines in thousands of printing plants in the United States and Canada.*

These Four Facts **generally recognized and admitted by printers everywhere and substantiated by the experience of thousands of Monotype owners, have established and maintained the supremacy of Monotype Machine Typesetting and Monotype-cast type in both Letterpress and Offset Printing:**

1 **The Monotype sets the standard of versatility and high quality for machine typesetting in printing plants in all countries where printing is done by modern methods.**

2 **In setting display composition, the highest quality of typography may be produced with speed and at low cost when Monotype-cast type and spacing material are used.**

3 **The sharpness and clarity of face, solid body and uniform height of type cast on Monotype machines combine to produce letterpress printing of the very highest quality.**

4 **It is common knowledge that the best plates for offset printing are made from proofs of pages set in Monotype-cast type—the perfect, always new printing surface.** ***No offset plate can be better than the proof which it reproduces.***

LANSTON MONOTYPE MACHINE COMPANY

TWENTY-FOURTH AT LOCUST STREET, PHILADELPHIA, PA.

Composed in Monotype Bodoni Family and Monotype Stylescript (New)

U. OF C. PRESS *now operating in fine new home opened in January—Complete publishing and printing facilities provided.*

By STAFF WRITER

IN January, the $400,000 University of California Press in Berkeley, Calif., got under way in its new building. Rightfully proud, University Printer Samuel T. Farquhar was host to faculty, management and the outside members of the printing trades at an open house so that they might see one of the finest printing and publishing plants in the West in full operation. The new University of California Press Building is in a conservatively modern style of architecture. When the new building was being designed, Mr. Farquhar insisted on an efficient flow of work and comfortable working conditions as the twin themes of the new building.

Aside from these two restrictions, the architects, Masten and Hurd of San Francisco, were permitted greatest latitude.

Since the activities of the Press are so diverse, the layout of the building presented a difficult problem. The publishing activities of the Press are rather sharply divided into two categories. On the one hand there is the traditional program of publishing the results of original research by the faculty. Most of this published research is distributed by exchange through the University Library or through the University departments or authors to other scholars working in similar fields.

A second publishing activity has been developed in the past five years, the production of books of a less specialized nature. Design and manufacturing standards have been kept high, despite the fact that these books are for more or less popular consumption. Six of these books have been among the Fifty Books of The Year chosen annually by the American Institute of Graphic Arts. The Press also produces nearly all of the printed material for the University's seven campuses—business forms, schedules, catalogues and so forth.

The accompanying floor plan shows the shop itself and is self-explanatory. In front of the shop, however, are the main offices of the Press, three stories in height. On the first floor to the left is the business office, beyond that the Manager's office and the office of Plant Superintendent V. J. McHenry. Also included are two smaller offices used by authors for proofreading or research connected with publication of manuscripts.

To the right of the main entrance, is a display room showing products of the Press, displays pertaining to the various fields of printing and publishing, and the main University Library's collections on various phases of the publishing and Graphic Arts fields.

A circular stairway of terrazzo with a simple aluminum railing runs from the entrance lobby to the second floor. Midway in the flight is a large window opening into the shop giving a full view.

On the second floor, to the left, is the sales department of the press. To the right are the editorial rooms of the press and, in the wing, a library containing every publication of the press. In the library, Mr. Farquhar plans to have an authoritative collection on printing.

The third floor is entirely devoted to binding. The Press binds and rebinds over 25,000 volumes a year for the main library and departmental libraries of the University. The bindery is reached by elevator from the shop floor so that no materials need be carried any great distance.

One of the features of the shop, in general, is the generous use of skylights. These are of the "saw-tooth" variety and give the even characteristics of north light. The south wall is built of glass brick to give added natural light to the manufacturing departments.

Each department of the shop was laid out by the individual foreman in association with Messrs. McHenry and Farquhar. Since the foreman is the one who must make his department produce, Mr. Farquhar believed that he should take part in the planning of his own department.

Attention to detail has made the new Press building one of the finest in the West. Floor-to-ceiling glass partitions divide the departments and control noise. The composing room itself is divided into three sections by glass partitions—one for the Monotypes (which is thoroughly ventilated by powerful exhaust fans); one for the proofreaders, which is lighted by Mercury vapor lamps to ease the strain on the readers' eyes as much as possible; and one for the rest of the department. The proofreaders' room is further noise-proofed by use of double-glass partitions instead of the single thickness in the rest of the shop.

The floor of the whole manufacturing department is covered by end-grain redwood blocks. This surface has long-wearing qualities and at the same time has a resilient character that makes it most comfortable for men who must spend the major part of the working day on their feet.

The basement of the University Press building is entirely devoted to paper storage with the exception of locker

View of University of California's new building at Berkeley, Calif. Production departments are on the ground floor. Business and executive offices occupy first floor front as well as the two upper floors. Said to be an efficient work shop.

JOBS CREATED BY PATENTED INVENTIONS IN PRINTING INDUSTRY

THE invention of the linotype in 1890 multiplied production over hand composition at least four times. Initially, it was widely criticized as a labor-destroying device. Introduction of the linotype and similar machines reduced costs of printing to such an extent that volume of printing grew sufficiently to provide employment for a far larger number of workers than had ever been engaged in printing and publishing.

Technological development in printing and publishing, as in other industries, has greatly expanded employment in allied occupations. Of outstanding importance is the growth in the United States of paper as a result of an increased amount of printing. In 1899 the United States consumed 1,986,310 cords of pulp wood as compared to 7,628,274 cords in 1935. Employment in paper manufacturing grew from 42,841 in 1914 to 103,344 in 1935, and according to estimates from the Bureau of Labor Statistics, employment in paper manufacturing in 1937 was 137,800. The 1937 figure is higher than that of 1929, which was 103,320.

According to N. W. Ayer & Son, Inc., which publishes the Directory of Newspapers and Periodicals, there were in 1938, 20,524 newspapers and magazines with an aggregate circulation far exceeding the population of the United States.

Following are latest available figures* on measurable employment in a number of occupations which have developed as a result of technological advance in printing:

Salaried employees and wage earners in book and job printing	184,626
Salaried employees and wage earners in newspaper and periodical printing	277,372
Salaried employees and wage earners in bookbinding, etc.	29,665
Salaried employees and wage earners in engraving	9,553
Salaried employees and wage earners in photoengraving not done in printing establishments	16,900
Salaried employees and wage earners in stereotyping and electrotyping not done in printing plants	6,511
Salaried employees and wage earners in manufacture of printing machinery and equipment	17,191
Salaried employees and wage earners in lithographing	29,874
Authors	12,000
Editors and reporters	52,000
Newsdealers	19,000
Employees in book stores	15,000
Wage earners in paper and pulp manufacturing	138,000
Employees in paper and paper products, wholesaling	27,000
Employees in wholesaling of books, periodicals and newspapers	9,000

**U. S. Census of Manufactures and Census of Business.*

---

rooms, and the boiler room. It has facilities for the storage of more than ten cars of paper at one time. In the boiler room, beside the regular heating plant, there is a large air compressor which serves every department.

The accompanying mechanical department layout shows that the plant has been designed to eliminate all superfluous movements. Manuscripts come from the offices direct to the composing room, then to the pressroom and straight from the pressroom into the bindery. Form racks are set in the wall between the composing room and the pressroom and are open on both sides. In this way, all live forms are instantly available to either department.

The service entrance which opens into the wrapping room of the bindery department, has been so arranged that trucks may drive directly into the building. The elevator descending to paper storage in the basement is also convenient to the loading platform.

New equipment installed includes four Model 30 Blue Streak Linotypes, Monotype keyboard and caster, 00 Flat-Bed Miehle press, and additional type cabinets, stones, and other composing room equipment.

One end of the bindery department is devoted to mimeographing for producing syllabi, examination papers and other similar material. Space has also been allowed here for the future installation of an offset press.

Flexibility has not been overlooked in the design of the University of California Press Building. All of the space behind the offices—the whole shop—is under one roof supported by widely spaced

Key to floor plan layout, UNIVERSITY OF CALIFORNIA PRESS, Berkeley, Calif.

COMPOSING ROOM

1—Foreman's desk
2—Monotype keyboard room
3—Monotype caster room
4—Linotypes
5—Machinist's bench
6—Magazine racks
7—Dump tables
8—Saw-trimmers
9—Proof presses
10—Line-slug table
11—Letterboard cabinet
12—Space and quad storage
13—Three-column and two-column galleys
13a—Job galley cabinets
14—Monotype work bench
15—Galley cabinet
16—Rule cabinet
17—Strip cabinet
18—Job galley cabinets
19—Furniture cabinets
20—Type cabinets
21—Imposing stones
22—Makeup bank
23—Copy bins
24—Two-column galley cabinets
25—Form truck
26—Job chase rack
27—Proof readers

PRESSROOM

28—Cylinder chase rack
29—Miehle presses
30—Miehle vertical presses
31—Kelley Clipper press
32—Job presses
33—Offset press
34—Ink and roller cabinet
35—Paper racks
36—Stock table
37—Cutter table
38—50 in. paper cutter
39—Makeready table
40—Press paper storage

BINDERY

41—Dexter folders
42—Folder
43—Cleveland folder
44—Stitcher tables
45—39 in. cutter
46—Bundling press
47—Paper drill
48—Punching machine
49—Smyth machine table
50—Tables

WRAPPING AND MAILING

51—Wrapping and mailing tables

SHIPPING

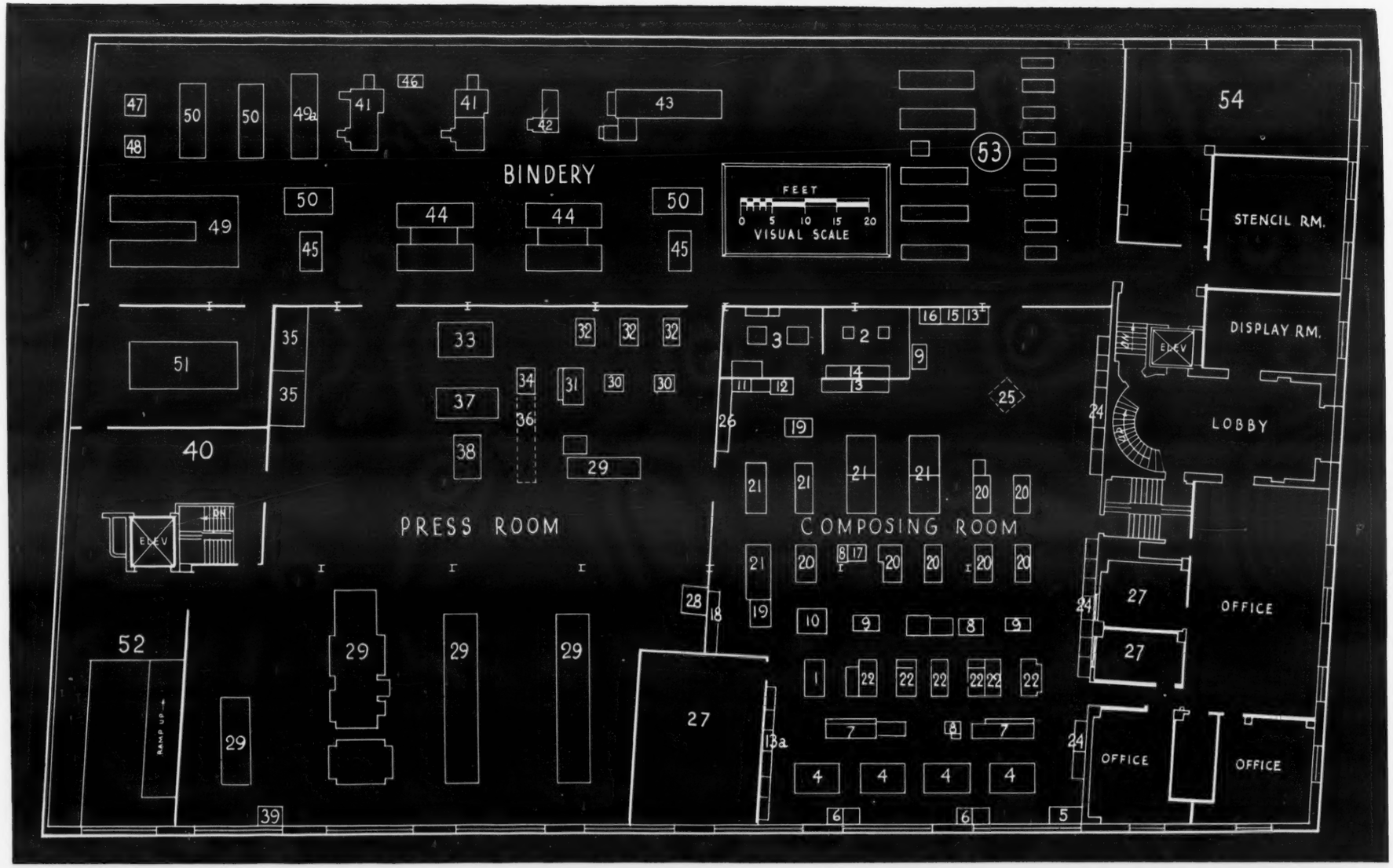
52—Shipping department

MIMEOGRAPHING

53—Mimeograph machines and equipment

STORAGE

54—Press book storage



Floor plan layout, Production Departments of UNIVERSITY OF CALIFORNIA PRESS, Berkeley, Calif. Note that while production takes a somewhat curved path, to all intents and purposes it flows straight-linewise. In the composing room, type travels toward the center of the department, forms are delivered from the center part of the room directly into the pressroom. The printed sheets go to the bindery, then to wrapping and mailing, and finally to the shipping department.

pillars. The present partitions between departments may be moved easily. The redwood block floor is easily taken up to lay new conduits for electricity, telephone or gas and each department has plenty of space for future expansion. With the present layout, any manufacturing unit is instantly available. An intercommunicating telephone system provides constant communication.

The University Press as it is constituted today combines both the publishing and printing activities of the University of California on all its seven campuses scattered throughout the State. Originally there were two departments of the University, the printing office and the press. Both grew separately to meet the needs of a rapidly expanding educational institution which today ranks as the largest in the United States. The printing office was established in 1877 and the press in 1893. On July 1, 1933, both departments were consolidated to become known as the University of California Press with Samuel T. Farquhar as Manager and University Printer.

Glass Jar Storage for Composing Machine Parts

By GORDON F. ELROD*

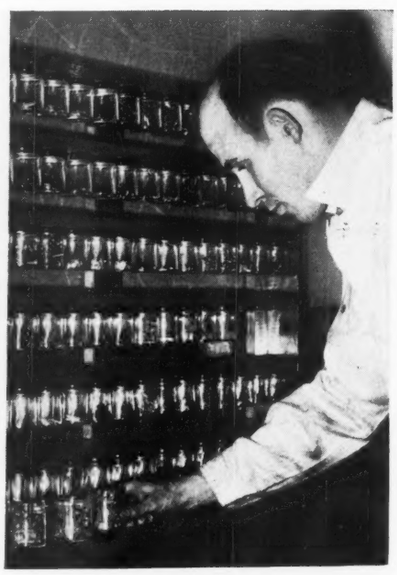
**Production Manager, Kansas City (Mo.) Journal.*

KEEPING spare small parts for composing machines in accessible condition and in such manner as to make the supply of these parts comprehensive to the machinists who use them is a problem in many composing rooms. We feel that the method for small parts storage as shown in the accompanying illustrations is the ideal method. Another advantage is that when the supply of any part is exhausted, the glass jar method provides an easy way for the machinist to notify the head machinist that that particular part supply needs replenishing.

In our plant we had built a wooden frame containing six cross pieces supported by an upright at either end. The bottom of the uprights and the base board extend outwardly so as to provide a standard or support for the rack.

The horizontal cross pieces or rails contain 144 glass jars, 6 rows, each containing 24 jars. Each jar top is screwed to the underside of the cross piece. A three-quarter turn enables one to remove the jar from its lid.

The cost of the frame and the jars is small and any plant can afford the small outlay required. The frame can be suspended on a wall or can be set at the back of the machinist's bench as is the one shown in the illustrations. The idea was conceived and the rack was made by our plant maintenance department.



View of composing machine small parts storage in plant of Kansas City (Mo.) Journal. There are 6 rows of jars, each containing 24 jars per row.

Close-up view of one of the small parts storage jars which has just been unscrewed from its lid which is affixed to the underside of a wooden rail. When the supply of shoulder screws in this particular jar has been exhausted, the empty condition of the jar notifies automatically that reordering is necessary.

Commission Resigns

Too late to be announced in the December *Printing Equipment Engineer*, but in accordance with instructions to "liquidate activities" of the commission, Chairman A. E. Giegengack submitted the commission's final report to President Callahan of the International Association of Printing House Craftsmen early in December, and in addition tendered his resignation as chairman of the commission. Subsequently, Commission Members Lee Augustine, V. Winfield Challenger, Charles D. MacGregor, Ollie Watson and J. Homer Winkler also tendered their resignations to President Callahan. Clark Long, by virtue of being junior past president, did not resign from the commission, his status being determined by the outcome of the membership vote on one of the amendments to the Craftsmen's Constitution and By-Laws, results of which were announced in January.

Trade Name Index which is a new feature of the 1940 Reference Issue, contains 1058 trade names of printing equipment and supplies together with the manufacturers or dealers.

Bird With Ideal

S. S. Bird (Sid), formerly of the Printing Machinery Company at Chicago has joined the sales force of the Ideal Roller & Manufacturing Company in the Chicago area. He is well known in the graphic arts industry.

New Matrix Faces

Intertype Corporation announces two more cuttings of Futura this month and one of Bodoni Condensed with Gothic No. 13 as shown here:

THIS PARAGRAPH set in twelve point Intertype Futura Light with *Futura Light Oblique* 12345678

12 Point Futura Light with Oblique

ABC abcdefghijklm 123

ABC abcdefghijklm 123

18 Point Bodoni Bold Condensed with Gothic No. 13

ABC abcdef 123

24 Point Futura Demibold

CENTRIFUGAL FORCE

IN MATRIX PREPARATION

By ROBERT D. BERRY*

**Sales Manager, American Publishers Supply, Lynn, Mass.*

EVER since those early days when matrices were made up of blotter and tissue the night before to be beaten in by hand the next day, too little importance in general has been given to the drying and forming operations of the matrix.

The advent of dry matrices eliminated the steam table and makeshift dryers were soon replaced with scorchers of standard manufacture. These served their purpose well, since their only need was to dry the mat and curve it for casting. However, with the depression came the call for economy and the demand for greater shrinkage. And now, the none-too-simple problem of shrinkage is added to the ever-present question: How can we improve our newspaper printing?

Such a high state of perfection has been reached in the manufacture of the dry mat, that efforts to improve it call for extensive and complex research. However, constant advance has been made, not only with the matrix but in machines, methods, and materials for handling the mat. As a result, stereotypers have a wide range of quality mats to choose from for their particular requirements and excellent equipment for manipulation. The dry mat is good, equipment and materials are satisfactory, yet craftsmen struggle to attain a quality of work just above that which they are now producing. Accepting stereotype plate-making facilities as the finest available, and leaving their improvement to manufacturers' research, the question is still with us: How can we improve newspaper printing?

As logically as the fact that a press will print only what is on the plate, is the additional fact that the stereotype plate will show only what is in the mat. And this brings us directly back to the dry mat. Now, let's alter the question: What can be done to improve newspaper printing in the stereotype plate-making department? Can the efficiency of the dry mat be improved in its manipulations and processes?

When a dry mat goes into the molding machine, it is new, unused: when the plate is cast and the mat is removed from the box, the mat is dead—its work is done. Assuming that the mat is molded correctly and cast properly in both instances with the precise materials, it is again logical to assume that any effort to improve the mat must be made between the molding process and the casting operation. We know beyond doubt that the finest mat excellently molded can be spoiled before it reaches the casting box. Therefore, in nearly every phase of mat making, efforts toward perfection are made in the molding operation. When it has been molded the mat is backed up, shrunk, dried, formed and cast, and very little is done to improve its quality. Every effort is made merely to retain its quality in the belief that all merit is dependent upon the molding process and the mat itself.

Regardless of the quality or the expert manipulation it has had in the molding operations, *the mat is still an unfinished product* when it leaves the molding machine. The proper molding of a mat is tremendously important and fundamentally essential for good newspaper printing. Yet other processes are to follow. Most important of these are: The mat must be shrunk, it must be dried, it must be curved; all this before it is cast—and it must go through these processes without losing the benefits of the operations.

Mechanical Executive is scratching his head. "Lemme see," says he, "Who makes Roscolene?" Mechanical Executive turns to page 165 of the new P-Double-E Trade Name Index and finds the answer. Simple, isn't it? Just 1058 trade names of printing equipment and supplies items and 420 paper trade names are listed in this new index. Use it freely.

From the first, the application of pressure to the mat while heat was applied has been the fundamental purpose of every matrix dryer—merely to curve and dry the mat. With the growing demand for finer stereotypes especially in the color register field, the necessity for more uniform pressure and more uniform heat had to be met. Thus it was only in recent years that the forming and drying of a matrix was regarded with sufficient importance and considered as one of the most important steps in the preparation of a dry mat.

To meet this call for fine mat preparation the centrifugal matrix scorcher, called Model "S" Form-O-Scorch, was designed.

Centrifugal Force Defined

Simply, centrifugal force is a force whose direction is from the center. The amount of pressure produced depends upon three factors: (1) The mass or the weight of the body being spun; (2) the diameter of the arc in which it travels, or the periphery it must cover, and (3) the speed at which it travels over this periphery. This force is used in industry for unlimited purposes because it has two distinct utilities. First, the force is a natural one. The pressure produced by a centrifuge is uniformly and evenly distributed. Secondly, the force of pressure

View of APS's centrifugal stereotype matrix scorcher. This machine is equipped with pre-shrink device which permits the mat to shrink to pre-determined size before drying the mat under centrifugal pressure.

Production Executives—*Refer to the 64-page goldenrod paper section of the 1940 Printing Equipment and Supplies section of Printing Equipment Engineer. This index has been compiled especially for your use. In it are listed representative manufacturers of equipment and supplies in convenient arrangement.*

to be applied can be regulated simply, or it can be increased greatly.

The centrifugal Form-O-Scorch machine for drying and forming stereotype matrices consists of a chamber heated electrically under thermostatic control. In this chamber a seamless tube is flexibly mounted so that it will gyro on its own axis. The tube is spun by means of a V belt drive from an electric motor mounted by its side within the main housing but in a separate compartment from the heating chamber. The height and diameter of this tube correspond with the casting diameter of the matrix.

After the molding and preparation, the mat is placed in the tube so that it forms around the inner wall to correct casting curve. The heat has been previously regulated to the desired drying temperature and the thermostat maintains this heat automatically. An automatic timer has been set to give the desired drying interval. With the mat fitted inside the tube, the machine cover is closed and when the motor starting button has been pressed, the tube spins. The electrical heating units are mounted inside the heat chamber and are located all around the tube, so that when the mat is spun at high speed the heat is applied uniformly.

At the bottom of the forming tube, below the mat, there is a centrifugal fan which rotates with the tube. At high speed, this action effects a draft that draws the heated air from the units up the outside wall of the tube, down through it and over the mat. Thus the constant circulation of heat plus rotation of the mat in the heated chamber assure uniform drying of every square inch of the mat.

Centrifugal Force Per Square Inch

In a machine designed to prepare matrices for casting in tubular plate equipment, this forming tube would be 7¼ in. i.d. and would spin at 4200 r.p.m. Because mats vary in weight, thickness and the amount of packing felt that is applied, let us consider that the average mat weighs 8 oz. (½ lb.). With the 8 oz. mat spinning at 4200 r.p.m. in a 7¼ in. i.d. tube, a centrifugal force of 910 lbs. is applied over its entire surface. The mat being 20 in. by 24 in., this is a pressure 1.89 lbs. per square inch.

For a mat that is to be cast for semi-cylindrical plates, a tube 12 in. i.d. and of the desired height is used. This would be spun at 3000 r.p.m. to give a pressure of 773 lbs. over the mat or 1.61 lbs. to the square inch. On machines for larger plate work it has been found that a forming tube slightly smaller than the desired casting diameter is advantageous because of the tendency of the mat to spring out slightly when removed from the scorcher.

On special machines for salesbook or color register work where no shrinkage is desired, or where special stiff mats are used, this pressure may be increased as necessary by increasing the speed of the tube. The pressure applied is limited only to the construction of the machine. One specialty printer is using a 7⅛ in. i.d. forming tube in a centrifuge spinning at 5040 r.p.m. with a .6 lb. mat. The pressure thus attained is 1550 lbs. over the surface of the mat, or 3.03 lbs. to the square inch.

It is easy to understand the principle of the centrifugal mat forming process. The even pressure applied emphasizes the molded impressions in a mat so that all molded characters are brought to an even depth. Line rules are forced into prominence with bold faced types and "lost" borders are eliminated. Half-tones are held securely for correct forming and are cast so that they print with no loss of detail which is in the original plate. Blacks cast solidly. A plate cast from a mat so prepared will have maximum evenness of printing surface permissible under present day casting methods. The quality of the printed page is governed by plate quality, just as the preparation of the mat governs the quality of the plate.

As is stated above, the application of pressure to the mat while heat is being applied has been the fundamental theory of every mat scorcher. In the centrifugal machine, these two factors have been highly developed.

Thus we have explained how the centrifuge forms and dries a matrix. Now, with the later demand for shrinkage, a necessary alteration was made in this scorcher. The same pressure that was so necessary in forming the mat retarded its shrinkage. Turtle-back scorchers either had to have a cover with adjustable tension so that the pressure could be relieved, or a cover of lighter weight had to be installed that would still form the mat but not hamper its movement in shrinking. The vacuum machine was equipped with a pre-shrink attachment that eliminated the pressure during the first drying interval so that shrinkage could be obtained. Pressure, excess heat and haste are enemies of shrinkage.

Pre-Shrinking the Mat

Shrinkage is dependent upon three factors: Correct temperature, the absence of pressure and the element of time. In the centrifugal Form-O-Scorch machine, pressure is applied for forming but when shrinkage is necessary this pressure is merely delayed. Example: The mat is placed in the forming tube of a centrifuge designed for shrinking and the starting button is pressed. The tube rotates slowly at not more than 500 r.p.m. for the necessary predetermined period. Thus, the heat is applied uniformly and maximum shrinkage is obtained. At the termination of the shrinking intervai, the duration of which depends upon the properties of the mat and the amount of shrinkage desired, the tube will automatically whip into high speed, exerting centrifugal force to form and curve the mat.

SPECIAL EDITIONS

New York Sun

THROUGH the courtesy of Production Manager J. E. Martin, *Printing Equipment Engineer* is in receipt of the 104-page copy of the *Voice of Business Number* of the *New York Sun*. The typography is fine, in fact, it's outstanding, as is the makeup. The conventional page folio lines have been made useful to the reader by the addition of bold face caps (isn't it Bodoni Extra Bold?) which refer to the editorial content of the page.

Full advantage has been taken in the makeup of the issue to place the maximum number of forms that would appear to best advantage on second impression pages. Because of the limitations in the number of second impression pages, a number of pages do not appear to best advantage.

None of the well known "plagues" of the stereotyper seem to be in evidence and the color is consistently even throughout the 104 pages. Production Manager Martin and his executive staff are to be congratulated.

Memphis Commercial-Appeal

Celebrating 100 years of existence, the Memphis (Tenn.) *Commercial-Appeal* consisted of 328 pages on January 1. One of the features of the edition was fac simile publication of a congratulatory letter received from President Roosevelt. Composing Room Superintendent R. J. Richardson, Machinist Charles Lawson, Stereotype Superintendent W. B. Astor, Jr., and Pressroom Superintendent Charles Sullivan are to be congratulated upon the fine appearance of this monumental edition of the *Commercial-Appeal*.

Issues Special

Celebrating the advent of 1940, the Flint (Mich.) *Journal* for January 1, consisting of 8 sections, 88 pages in all, has been received from Mechanical Superintendent Al Oberg. The halftone printing is uniformly excellent, showing cooperation among the departments concerned. One of the sections contained better than 6 pages of greetings from Flint business men.

J. M. HUBER INC.

announces a significant advancement in the art of printing

J. M. HUBER INC.

announces a significant advancement

Solid ink is printer's objective

Ever since printing began, man has used liquid inks . . . when his objective has been to leave upon paper a solid deposit.

Because of this centuries-old dependence on liquid inks, printers have had to struggle with a multitude of drying problems, especially when speed has been essential.

Now, with the development of the Huber Velo Cold Set Printing Process and Velo Cold Set Ink—*an ink that solidifies the instant it touches the paper*—the drying period with its many problems is eliminated.

Velo Ink is solid

Huber Velo Cold Set Ink in its natural state at ordinary temperatures is already the solid that other inks approach as they dry.

Heated to a liquid on press; solidifies on touching cool paper

By the application of low-temperature heat (approximately 200° F.) to the press—ink fountain, metal rollers, and plate cylinder—the solid ink is made fluid . . . only to solidify again *instantly* upon touching the cool (room temperature) paper.

In melting, and again in solidifying, the ink undergoes no chemical change. It does not dry by absorbing oxygen from the air . . . or by the evaporation of volatile solvents . . . or by penetrating into the paper. It is the same substance after printing that it is before . . . *pure ink . . . which, after being heated to a liquid on the press, "dries" merely by returning to its natural, solid state instantly upon touching the comparatively cold paper.*

in the art of printing

HUBER VELO COLD SET INK AND PRINTING PROCESS (PATENTS PENDING)

So instantaneously does this "cold set" solidify the ink that:

1. Printing speeds are limited only by the top speed at which the web can be run. The faster the paper travels, the faster the ink solidifies, for the ink is removed that much quicker from the liquefying heat of the printing plate.

   No offset webs are needed at even the highest speeds.

The faster the paper travels, the faster the ink solidifies

2. There is no penetration of ink into even the most absorbent papers. All the ink stays on the surface, producing stronger solids, leaving cleaner highlights, and eliminating strike-through. Small type is made noticeably more legible; and fine-screen halftones can be printed even on absorbent stocks.

No absorption of ink by the paper

3. The lead of the paper through the press is not lengthened, and the paper itself is not subjected to stretching, shrinkage, or strain, for it does not pass through any heating mechanism.

No additional register problems

The printing plates are left clean after each impression, for the mere touch of the cold paper freezes the ink and lifts it bodily from the plates. This complete transfer plus the fact that the ink cannot thicken, gum, or harden on the heated press, *makes washups unnecessary except to change color.*

No washups except to change color

If, during extended shut-downs, the heat is turned off, the ink may be left on the press, for with reheating, it becomes fluid and printable again.

(*Continued on next page*)

J. M. HUBER INC.

announces a significant advancement in the art of printing

HUBER VELO COLD SET INK AND PRINTING PROCESS
(PATENTS PENDING)

(*Continued from preceding page*)

Press changes are simple

The changes necessary on the press are comparatively simple, and can be made by your own press manufacturer with whom we will co-operate fully. These changes do not limit a press to Velo Printing, for by turning off the heat you can print with the inks you now use.

Now available for rotary presses

The Velo Cold Set Process is now available for rotary presses, where its advantages of speed, economy, and ease of operation may be realized to the fullest extent. Its release for flat-bed presses will be announced in the near future. Then to virtually the entire printing industry there will come an opportunity to benefit from this new and welcome simplicity in the intricate job of applying ink to paper.

Specimens of Velo Printing and additional information will be mailed at your request. Write to J. M. Huber, Inc., 460 West 34 St., New York. Branch offices in Chicago, St. Louis, Boston. Dealers in principal cities of U. S. A. and foreign countries.

HUBER PRODUCTS HUBER INKS IN USE SINCE 1780

Four Color Process Blotter Printed From 133 Line Screen Rubber Plates

SHOWN in the accompanying illustration is a miniature reproduction of a 4½ in. by 9¾ in. bleed trim blotter which is thought to be the first four-color process job ever printed with rubber plates, 133 line screen. Examination shows accurate register.

The work was executed by Theo. Moss Co., Inc., Brooklyn, N. Y. Vice President Franklin Moss states: "We didn't print this blotter to sell rubber plates for fine-screen halftone work. As a matter of fact, we recommend using as coarse a screen as the application will permit. However, this job does prove that fine detail and accurate register are possible with rubber—provided the rubber plates are made by experienced workers using laboratory controlled materials and full-scale precision equipment developed for the purpose."

This entire blotter, printed with Theo. Moss Rubber Plates from 4-color process engravings supplied by the Superior Printing Ink Co., Inc., illustrates the high quality of work now possible with Moss Rubber Plates.
For New Business, New Profits Use—
RUBBER
Printing Plates and Design Rollers
PRECISION MOLDED WITH Supara THE LONG LASTING RUBBER
BETTER COVERAGE ON ALL STOCKS—SAVE ON MAKE-READY AND INK
ELIMINATE OFFSET, EMBOSSING AND BATTERING. FOR WEB, ROTARY
AND FLAT BED PRESSES WITH OIL, ANILINE OR WATER COLOR INKS.

Miniature reproduction of blotter printed four-color process from 133-line screen rubber plates.

The blotters, stated Mr. Moss, were printed on a Style B Kelly press at a speed of 2400 p.h., using regular process inks. The stock used was 120 lb. White Albemarle Enamel Blotting, running size 9½ in. by 12 in., run one up and twirled. The only difference in the running of these Supara rubber plates over zinc or copper plates was the precision setting of the form rollers and a kiss impression. There was a saving of about 40% in ink, and there was considerably less makeready required than is normal for metal plates.

Who Makes It? The goldenrod paper section, 64 pages, containing the latest revised P-Double-E Printing Equipment and Supplies Index will tell you. It's bound into the 1940 Reference Issue. Consult the index when you want to know where equipment and supplies may be obtained.

Expects Increase

A goal of 200% increase in business for 1940 is set up by Ralph H. Nolan, sales manager for Nolan Machinery Corporation, manufacturers of printing equipment in Rome, New York. This prediction is based by Mr. Nolan on the 250% more printing equipment sales in 1939 than in the previous year.

Ralph, brother of Edward J. Nolan, designing engineer, has been with the firm for less than two years. Ralph gave up a bank position to take over the sales end of the Nolan business, leaving Edward free to devote his entire time to designing and production.

Sales Manager Ralph H. Nolan, Nolan Machinery Corporation.

Last fall the Nolan firm observed its seventh year in business by moving into a new and larger factory building, adding equipment and increasing the force to keep up production with sales. Edward Nolan started the business in 1933 as a young engineer who had made a special study of print shop machinery.

Fluorescent Light Application

FROM time to time, since announcement of the fluorescent daylight lighting tubes, new applications are being found in printing plants. The first of these applications, of course, is for general printing plant illumination; another is that of a special application for daylight color matching in the plant of the Crowell-Collier Publishing Company, Springfield, Ohio.

The latest utility coming to the attention of *Printing Equipment Engineer* is that of fluorescent negative viewing units in the color engraving department of the Chicago *Tribune*. The *Tribune* is a pioneer in the development of newspaper run-of-paper color and has spent considerable time and money in investigational work.

The new daylight simulating unit shown in the illustration, state executives of the *Tribune* production department, is not a particular feature in the process of making or registering newspaper color plates. The units are merely a new arrangement of fluorescent lamps which provide an even light of constant intensity value such as is required when the photo-engraver views negatives. They are used on dark days and at night.

Each viewing unit frame contains two 24 in. 20 w. fluorescent tubes mounted in front of enameled steel reflectors operated on 115 v., d.c. circuit. The lighting is flickerless. Each unit is mounted on a track within and extends completely across a window opening at the back of the developing trough. Ball bearings and counterweights have been added to provide a free and easy vertical movement. A dark window shade is attached to the top of each of the viewing units to shut off outside light when the units are lowered by the photo-engraver. Flashed opal glass mounted on an angle is used for the front of the box. The glass is mounted at an angle with curved white blotters in the lower part of the box to prevent reflection.

View of Chicago Tribune's color photo-engraving negative viewing daylight units.

Walter C. Crighton is Secretary-Treasurer of new organization.

Harry Zerbe will assist on Constitution and By-Laws Committee.

Barnard F. Garrity Chairman of the Program Committee.

Richard M. Fitzgerald, Constitution and By-Laws Chairman.

Some executives of New England Mechanical Conference.

NEW ENGLAND MECHANICAL CONFERENCE EXECUTIVES SELECTED

AT ITS meeting held in Boston, on Tuesday, December 5, the Board of Directors of the New England Newspaper Mechanical Conference re-elected Production Manager Francis M. Britton of the Nashua (N. H.) *Telegraph*, as president for 1940. Walter C. Crighton of the New London (Conn.) *Day*, was elected secretary-treasurer. Production Manager Bernard F. Garrity of the Hartford (Conn.) *Times* was chosen program chairman, and Production Manager Richard M. Fitzgerald of the Worcester (Mass.) *Telegram-Gazette*, was selected to serve as chairman of a committee to draw up a constitution and by-laws for the new organization.

Mr. Fitzgerald will be assisted by Production Manager Herbert T. Stanger of the *Christian Science Monitor* and Press Superintendent Harry E. Zerbe of the Lawrence (Mass.) *Eagle-Tribune*.

It was voted to hold the second conference at Boston's Hotel Statler, Sunday and Monday, October 13 and 14. Registration will occur on the previous Saturday afternoon.

Southern Newsprint and Ink Developments To Be Discussed at Western Division Conference

MECHANICAL Superintendent A. I. Lundberg of the Ft. Worth (Tex.) *Star-Telegram*, and chairman of the Western Div. S.N.P.A. Mechanical Conference, is expecting between 400 and 500 newspaper production and mechanical executives and manufacturer and supplier representatives at the second annual meeting to be held at Dallas's Hotel Baker on February 19 and 20.

Some very interesting discussions are planned. Ralph G. Waters, Texas State Insurance Commissioner of the Casualty Division, will discuss accident prevention in newspaper mechanical departments. The chemist of the Southland Paper Mills, Inc., of Lufkin, Texas, which is the first commercial paper mill erected for the manufacture of newsprint from southern pine and which was scheduled to start operations in January, will discuss the new project and problems which are likely to arise from the use of this new newsprint. He will probably be accompanied by one or two of the technical men connected with the mill. A chemist of International Printing Ink, as yet not designated, will speak on new developments in ink. J. H. Gibson, foreman of the Rotogravure Department of Houston (Tex.) *Chronicle*, will discuss *Preparation of Photo-Engraving Copy* and will illustrate his remarks with an exhibit. O. M. Harper, of the Tulsa (Okla.) *World*, will be in charge of a discussion of the Lengel Alltone process.

Chairmen who will lead discussions of problems for various mechanical departments are: M. T. Scott, Abilene (Tex.) *Reporter-News*, Composing Room; I. D. Price, Ardmore (Okla.) *Ardmoreite*, Pressroom; F. F. Anderson, Houston (Tex.) *Press*, Stereotype Room, and H. S. Dunn, Ft. Smith (Ark.) *Times-Record*, Photo-engraving Room.

Exhibit space reservations are being furnished free to newspaper equipment and supply houses.

The Executive Committee is composed of: Bert Conner, Ft. Smith (Ark.) *Times-Record;* O. M. Harper, Tulsa (Okla.) *World;* A. T. Blease, Corpus Christi (Tex.) *Caller-Times;* L. T. Deputy, Dallas (Tex.) *News;* W. J. Phillips, Oklahoma City *Oklahoma and Times;* J. H. Gibson, Houston (Tex.) *Chronicle*, and A. I. Lundberg, Ft. Worth (Tex.) *Star-Telegram*. C. W. Tabb of S.N.P.A. Dallas Office is permanent secretary.

Leven Deputy, Mechanical Superintendent of the Dallas (Tex.) *News*, is in charge of local arrangements and is working out the details for an entertainment program outside of the hours devoted to the Conference sessions. Newspaper equipment and supply manufacturers will give a banquet on Monday evening, February 19.

New Vice President

Precision Bearings, Inc. of Los Angeles, Calif., announces election of Harold Swanton as vice president, succeeding Norman Bell who resigned.

Lining Bank Gothics

Mergenthaler Linotype Company presents Lining Bank Gothic Light with Medium in four 6-point and five 12-point sizes — caps, figures and points.

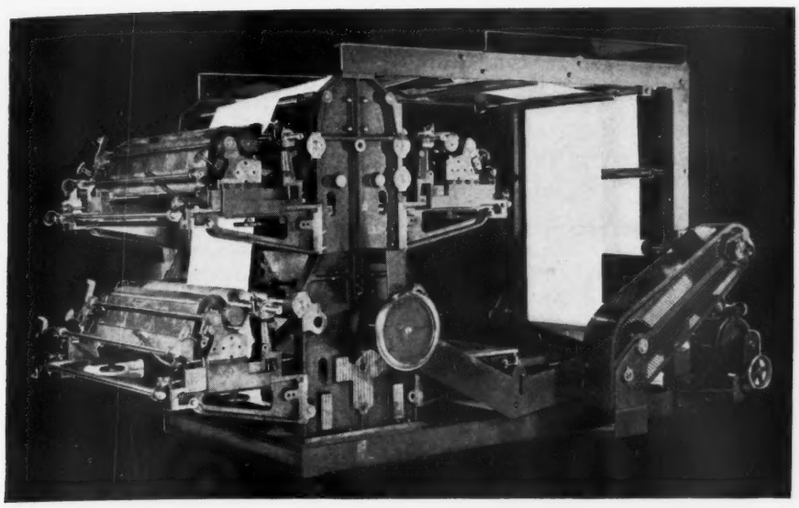
ABCDEFGHIJ5,
ABCDEFGHIJ5,

All of the 6-point sizes are on the same alignment and will cast on a 6-point slug, and all of the 12-point are on the same alignment and will cast on a 12-point.

The latest edition to Mergenthaler's Bodoni family is 9-point Bodoni Bold with Italic, shown below:

HERE is a brief showing of the 9-point size of Linotype Bodoni Bold with *Italic*. Modern man *cannot be served by a tool that is just good enough or a little better than pretty good. The good*

Developments in Equipment and Supplies



Aniline Printing Press

The Kidder Aniliner Press is offered by Kidder Press Co., Inc., in one to six colors, with gravure units optional. The large machines are provided with a platform system. A variety of thread-ups is possible. Web widths run from 26 in. to 72 in., and the cylinder circumferential range is from 15 in. to 36 in. This aniline press is of rugged design to permit precision color printing at high speeds.

For web control, the press is provided with Kidder's in-feed control unit which relieves the type rolls of having to pull the paper under heavy tension. Press rigidity and carrying of web in continuous arc, assist in keeping paper travel steady. The Link-Belt system of rewind is used.

Ink control is facilitated by extra large fountain rolls, and there is a precision adjustment of inking roller against plates.

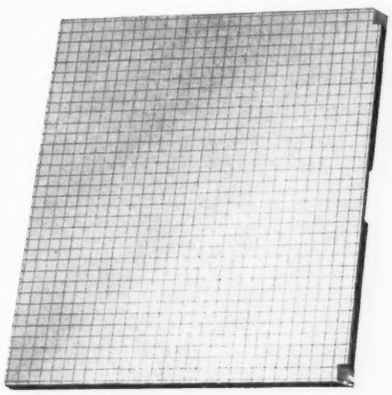
Accurate "kiss" impression is made by adjusting plate and impression cylinders. This adjustment is not altered when the plate cylinders are raised and lowered for stopping and restarting.

All adjustments can be made from one side of the press. At arm length from the operator are controls for regulating ink flow and adjustments for both pressure and register. Means provided to separate impression and plate cylinders and ink rollers when press is shut down, and still permit rotation of inking rolls. This arrangement prevents trouble caused by drying ink, making it unnecessary to wash rolls before restarting.

Anti-splash guards are provided. Ink fountain pens are easily drained and may be removed quickly for overnight cleaning. To remove the plate cylinder, a turn of a wing nut unlocks the bearing.

Rubber Plate Base

The Printing Machinery Company has developed three new types of metal rubber plate base for use on flat-bed presses. The PMC rubber plate bases are made particularly for use with molded rubber plates which do not have a metal backing. The plates are held firmly to the metal base by means of an adhesive



PMC'S Sectional Rubber Plate Base.

fabric. The bases are manufactured to precision measurements.

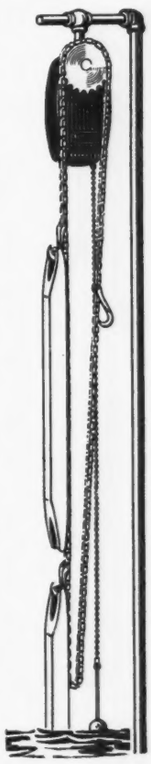
The new PMC sectional rubber plate base is useful for molded rubber plates, single-color and multi-color; gang-forms of duplicate rubber plates, sets of color and tint plates, large or small; reproductions of ruled forms, charts, etc. This style of base is made up of L-shaped units, the same size as the L-units employed in the Sterling toggle honeycomb base. The units for rubber plates are solid on the surface.

The base is manufactured from two different metals (1) special aluminum alloy, and (2) semi-steel alloy and is supplied in any desired height, without division lines or with light, medium or heavy division lines. The complete Sectional Base, of the specified size can be locked in a quoinless self-locking steel chase.

Another new type of base is that known as the PMC One-Piece Rubber Plate Base. It is made of semi-steel alloy, and is cored to eliminate unnecessary weight, of any desired height or any specified all-over size, to fit a regular chase for any make, style or size of flat-bed cylinder press, including automatic job cylinder presses.

In addition, the Printing Machinery Company is manufacturing special rubber plate bases for unusual rubber plate applications.

Jordan Metal Feeder



The Jordan Metal Feeder announced recently by United American Metals Corporation, is made for application to Intertypes, Linotypes, Ludlow, Monotype and other composing and casting machines.

Metal ingots are suspended on spaced hooks mounted on an endless chain, which in turn is suspended on a gear wheel at the side of the feeder control box. The ingot supporting hooks are so spaced that the ingots do not overlap, but follow each other automatically. It is claimed that the chain movement is so controlled that the ingot will not "run away" or feed more metal than is required to bring the molten metal in the pot crucible up to proper level.

Manufacturer states that operation of the feeder is independent of machine operation, immersion of the ingot being actuated only by the amount of metal in the pot.

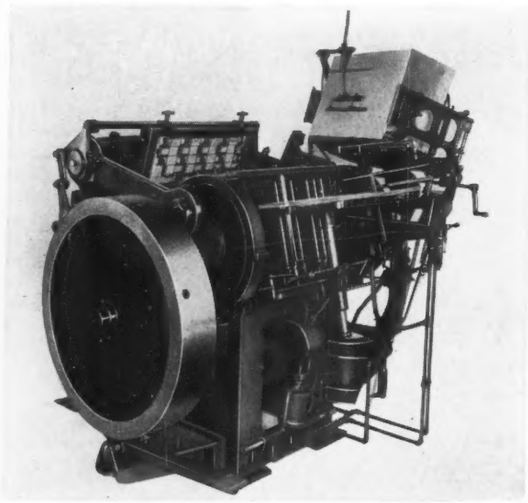
The feeder is fitted with what is called a "silent alarm." While the feeder is

operating, a soft, purring click is heard. As soon as the ingot is melted down to where it no longer feeds metal to the pot, the clicking ceases, to indicate to the operator that the hooks are calling for metal.

Paper Trade Name Index *appears on pages 168-169, 1940 Reference Issue of P-Double-E. Gives Trade Names of many kinds of paper stock, tells who makes the stock and what kind of stock it is. Consult this index when you want to know who makes it.*

Cutting-Creasing Press

The automatic 17 x 25 Thomson Cutting and Creasing Press may now be had equipped with Chandler & Price Feeder. This press has a solid steel platen and bed fitted with the new micrometer impression adjustment. Manufacturer states this press was designed to handle small and compact forms of folding paper boxes and other die-cut work in this sheet size. Floor space with platform 97 in. by 110 in. New weight is 9059 lbs.

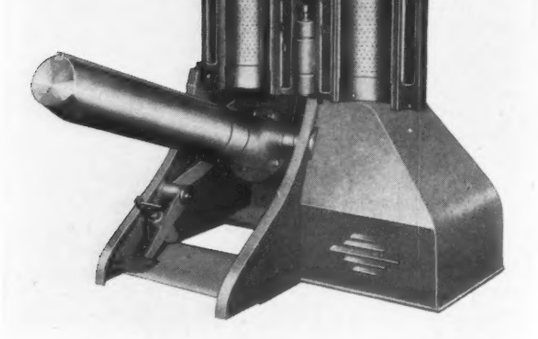


Thomson is new automatic 17 in. by 25 in. Cutting and Creasing Press equipped with Chandler & Price Feeder.

Vacuum Casting Box

Shown in the illustration is an open view of the new Duplex Automatic Vacuum Stereotype Casting Box, announced recently by The Duplex Printing Press Company. Many new features have been added to the box to speed up operation. All working parts have been enclosed in the streamlined design casing. The cooling of plates in the box is measured and controlled automatically. Vacuum is obtained through a rotary vacuum pump of oversize capacity, powered with a 1 h.p. motor. The capacity is greater than is required under normal operating conditions.

Duplex announces that tests conducted at the factory show that stereotype printing plates made in the new box are much more accurate and of better structure than plates made in the company's former equipment.



Open view of new streamlined stereotype vacuum casting box by Duplex Printing Press Company.

Photoelectric Relay

A compact photoelectric relay which can be used for counting, sorting, weighing, measuring, signalling, and similar functions, has just been announced by the Westinghouse Electric and Manufacturing Company.

It is designated as type RQ Photo-Troller, has two normally open and two normally closed contacts, each rated at 10 amp. on 115 v. a.c. circuits. It operates on a change of 40 foot-candles, if not more than 15 foot-candles of extraneous light is present.

Increased sensitivity is obtainable by means of a condensing lens. The unit may

be wall or bench mounted with open wiring, or with concealed or exposed conduit. It has a gray die-cast chassis with a block molded cover which is removable without tools.

New Westinghouse type RQ Photo-Troller is compact and may be connected easily to any 115 v. a.c. line.

Steel Die Inks

International Printing Ink Division of Interchemical Corporation announces inks for steel die engraving work.

Inks were developed after extensive research covering new materials and problems arising from inks used in this type of printing. Chief difficulties in die engraving were found to be the slow drying rate of thick films, low coverage per pound of ink, and brittleness of the film after ageing. New inks are reported to dry to tack-freeness in thick films without increasing the rapidity of drying in the fine engraved lines of the die. Prints are said to have good flexibility, after ageing, and greater coverage. Inks can be printed on difficult papers like flints and glazed stock. Fast drying "picture" inks are included in the line, for printing engravings of scenes, people, and other graphic subjects requiring fine line reproduction.

This is new Grayda cast in 18 to 96 point

Specimen lines of Riley's Grayda

Grayda Script

Grayda, the new ATF script that was previewed at the National Graphic Arts Exposition, is now in production. The new face was released on December 15 in a complete range of sizes from 18 to 72 point. The 84 and 96 point are in preparation and will be available shortly.

The character of Grayda is derived from the weighting of the letters at the top and bottom instead of on the vertical strokes. The lower case letters are large in proportion to the caps. While the face has a Victorian flavor, it combines with many other type faces, particularly such straight-edged faces as the Stymies, Cheltenhams and Gothics. The type gains utility from its narrow measure

Grayda is cast on angle body for maximum strength and for greater usefulness is offered with two different styles of caps. One set has plenty of flourish, while a simpler set is provided for instances where sedateness is desired or space is limited.

With Grayda a new personality appears in the field of American type design. Frank Riley, the designer, is well known in the printing trade for his layouts, art work and hand lettering, but this is his first attempt at a complete interpretation of a new letter form.

Riley considers typography and printing among the important arts, and as such he believes that they must be constantly creating new modes and feelings.

"In the arts," he says, "there can be no final word. Printing and type design cannot remain static and live. In the art of printing, as in the other arts, freshness and energy are essential."

Executive Obsolescence—*Technological progress in the printing industry during the last 10 years has been particularly active. This progress has been severe in the minds of those executives who did not comprehend just what was taking place until after the changing forces in the industry had commenced to pinch the old conception of things. Radio, cheap reproduction processes, even flux-like changes in the printing processes, contributed to the upsetting of the executive who has not kept pace.*

Brother, watch the technological parade, but most of all, tune your mental processes with progress!

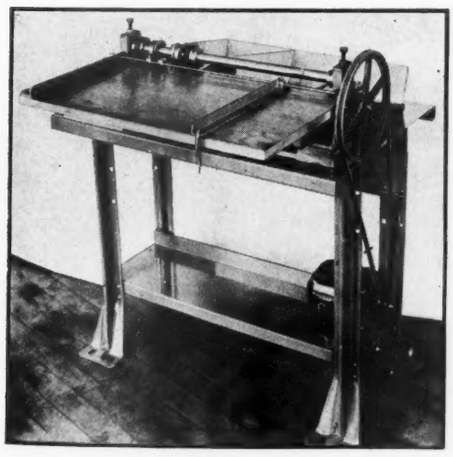
Bench Type Rotary Perforator

Maker states this is a precision machine that perforates, slits, scores and creases. The novel feature of the perforation is the shear method of slitting the perforations, the paper being actually slit between the tabs. Slits can be furnished to any desired length up to the ¾-in. length used for "snap-out" work. Two widths of tabs can be furnished. With special wheels, double lines of scoring may be done as narrow as ⅛-in. apart.

While the shear action has long been used for slitting, states sponsor, this is the first application of the principle for perforating. This method largely eliminates any burrs and provides long life to units.

Stock from light weight tissue (including cellophane) to heavy fiber will run easily. Several sheets may be fed at one time on lightweight stock without the necessity of ironing out burrs. Sheets lie practically flat allowing automatic press feeding after perforation. The regular units permit several parallel lines of perforations 1½ in. apart as a minimum, but special types can be provided for parallels as close as 5/16 in. Creasing and scoring may be done in parallel lines about ¾ in. apart.

Standard equipment includes two pairs of feeding wheels, with quick adjustment for depth of perforation, scoring or creasing. Other units can be supplied to slit, to crease, or to score. Slitting may be done in combination with perforating but both creasing and scoring should be separate operations although either may be done in multiple or parallel lines. Manufactured by the Lester & Wasley Company.

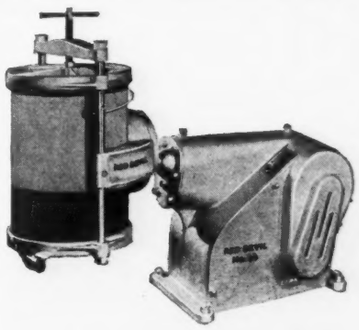


View of Leader Bench Type Rotary perforator recently announced by Lester & Wasley Company. Work table is 15 in. deep by 28 in front. Stock receiving layboy is 15 in. by 24 in. width with adjustable backboard for various sheet lengths. Maximum sheet size 24 in. wide by as long as operator can handle and feed. Feeding speed is about 110 ft. per min.

Red Devil Ink Conditioner

The Red Devil electric ink conditioner is adapted for the conditioning of inks and similar heavy liquids requiring severe agitation to secure proper working mixture.

The machine is designed for conditioning the contents of 5 gal., 3 gal. or 2 gal. cans. Its three-way motion (outward, upward and downward) creates a high-speed agitation inside the can, disintegrating side-wall sediment and thoroughly mixing the entire contents. The can holder is adjustable to three different positions — upright, sidewise and upside down. Position changes are made by pressing a lever and whirling the can into the position desired before turning on the operating switch.



The machine is driven by ⅓ h.p. 60 cy. 110 v. enclosed motor. All other mechanism operates in a bath of oil.

Those desiring full information are invited to write Landon P. Smith, Inc., direct, or in care of *Printing Equipment Engineer*.

PUBLIC PRINTER'S REPORT

Interesting Document

THE annual report of the Public Printer of the United States to the Congress contains a complete account of the operations of the world's largest printing plant. The fiscal year 1939 was one of the busiest in the history of the office. The total resources available to the Government Printing Office, including the office of the Superintendent of Documents, was $20,566,023.68, which represents an increase of $787,108.89 over the preceding year.

Shot through the report are evidences that the public printer is questing eternally to find and accomplish ways and means for producing work at lowest cost, secure efficient operation and to develop equipment and supplies not now on the market to assist in securing efficient operation.

Health and welfare activities in the Government printing office receive notable attention, for which the public printer is to be highly commended.

It is an impossibility to discuss all of the features of the report covering the activities and operations in the office. The first pages of the report, however, are devoted to a sharp reply to criticisms that Government Printing Office prices have increased. He disproves the increased price charge by a recapitulation of the last ten Annual Reports which shows that while the number of copies of printed matter delivered to the various Departments and agencies has increased 65% during the last 5 years, the charge to the Departments for this 65% increase in volume increased only 13% and that the manufacturing cost per thousand copies of printed matter delivered to the Departments dropped from $3.02 to $2.07 during the last 5 years. As to the statement that the Departments and agencies could get printing done by outside shops for lower prices, the Public Printer cites the investigation conducted for the President by an independent agency and that the report to the President was to the effect that nothing would be gained by transferring any part of Government Printing Office work to commercial sources.

Inasmuch as the public printer's report discusses investigational work conducted by the Department of Tests and Technical Control and production methods adopted during the past year, we recommend highly that production and mechanical executives read the complete report. Perhaps some of the innovations adopted will be serviceable in your own plant.

Durolith Roller

Ideal Roller & Mfg. Co. announces a new vulcanized-oil roller for use in any position on lithographic presses. This new roller is said to have four times the tensile strength of the former Ideal Lithographic Vulcanized-Oil Roller to withstand the gruelling requirements of high-speed presses. The Durolith Roller is claimed to be as tough as leather, has a dry, non-greasy surface, is lathe-ground to precision to permit light setting and perfect water control; prevents water accumulating in either the distributor or intermediate position; uniformly regulates ink for heavy solids, light tints or delicate detail on exacting color work.

Manufacturer states the Durolith Roller will not crack or split, is not affected by oils, inks, high humidity or water; will not change diameter; no shrinkage or expansion and does not dry out.

Testing Facilities

It has been announced by Production Standards Corporation that facilities have been established whereby new printing equipment may be tested and manufacturers' claims may be verified. These facilities are now available to manufacturers desirous of enabling the printing industry to avail itself of this service without waiting to learn of the results of pioneer installations of equipment in printing plants. "Full provision has been made," states *PAR Printing Plant Management Bulletin*, "for testing equipment as carefully and completely within a relatively short period as would ordinarily be possible only over a term of many years of normal operation. When testing of a specific machine is completed, certification of its capabilities will be made to users of Production Standards' subscribers and to the manufacturer."

Merged

It has been announced that as of December 29, 1939, the Agfa Ansco Corporation, Binghamton, N. Y., was merged with General Aniline & Film Corporation. The Agfa Ansco Division of General Aniline & Film Corporation will continue operation under the same management and policies.

Miller Development Work

In reviewing its 1939 printing press development, the Miller Printing Machinery Company states the demand for modern automatics is most likely due to generally improved business conditions and the realization that too many antiquated and inefficient presses are being used in an attempt to match 1900 production standards against today's demands for faster service, higher quality and more economical production costs.

Among its developmental work, the Miller Company points out that the Miller 27x41 Two-Color Automatic now has a maximum operating speed of 3500 sheets, equal to 7000 imp. per hr. The new 27x41 Miller Major Automatic now runs a maximum of 4000 sheets per hour. The Miller Automatic Cutter and Creaser has had its maximum running speed increased to 4000 sheets per hour. The new Miller 38x52 SK Automatic, single color press, runs at 3250 sheets per hour.

CORRECTION

In the Printing Equipment and Supplies Trade Name Index published in the December 1939 issue of *Printing Equipment Engineer*, the name "Royle" inadvertently was printed as "Royal." The trade name for routers, cabinet saws and circular saws furnished by John Royle & Sons as listed on page 165 should be spelled "Royle."

Intertype Notes

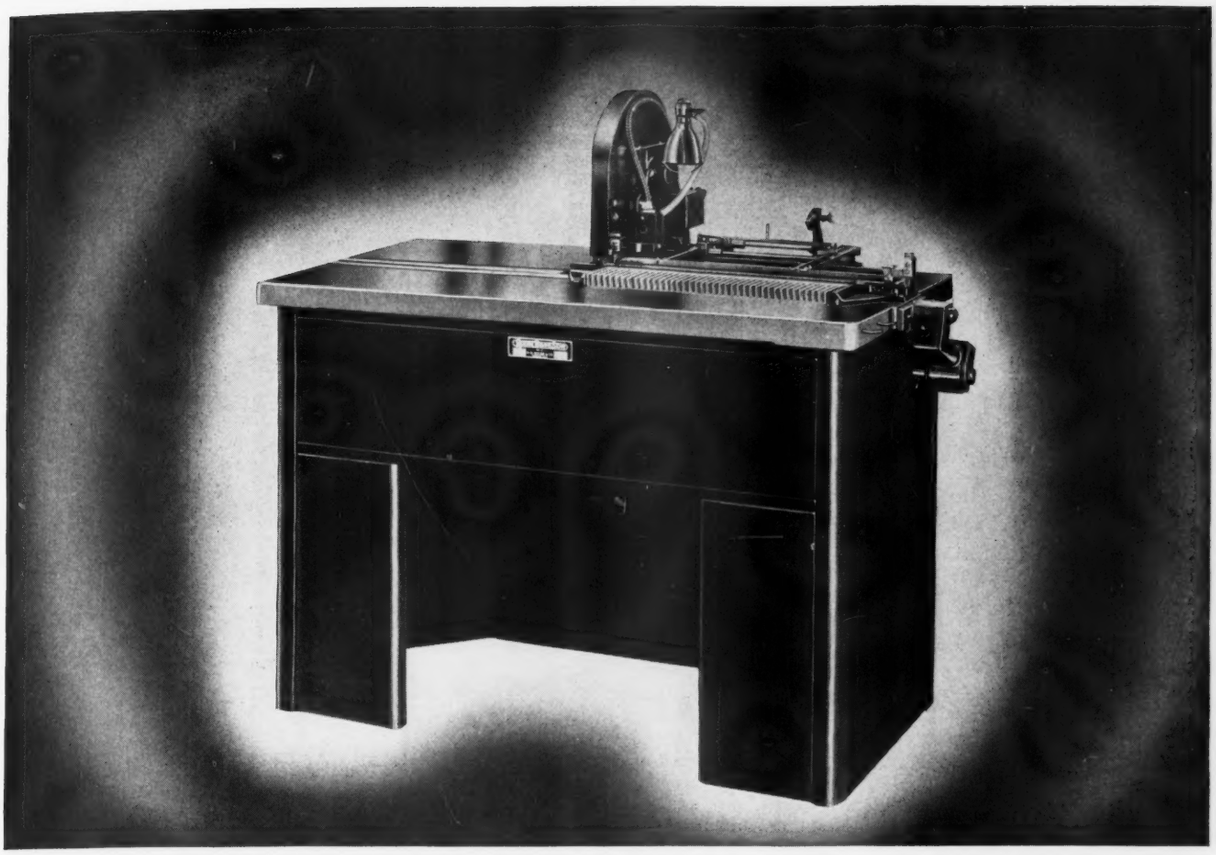
Howard N. King, typographic consultant for Intertype Corporation, is scheduled to speak before the Merrimac Craftsmen's Club, January 18, and the Albany Craftsmen's Club, January 19.

President Neal Dow Becker tendered a dinner to Intertype Corporation's Quarter Century Club on December 15, at the Hotel Bossert, Brooklyn. With the addition this year of ten new members the Club roster now comprises forty-nine members, each of whom has been employed by Intertype for twenty-five years or more. Each new member was decorated by the president with an emblem, symbolic of his twenty-five years of service and was presented with a sum of money.

Intertype Corporation announces the appointment of Arlan Frank Fuller to represent the company in several New England States. Mr. Fuller is twenty-five years old. His territory includes the Maine, Vermont and New Hampshire, and job printing and composition houses in Suffolk County, Mass. He will make his headquarters at Intertype's Boston office.

Myers Passes

George Myers, Manager, Atlanta District Office, Ludlow Typograph Company, passed away on Friday, January 5. Funeral services were held in Atlanta on January 8. Mr. Myers became indisposed at the time of the Graphic Arts Exposition in New York. He seemed to have recovered on his return to Atlanta after the Exposition. Shortly after his return he entered a hospital in Atlanta for treatment. Mr. Myers had many friends throughout the South and was actively interested in Craftsmen's affairs.

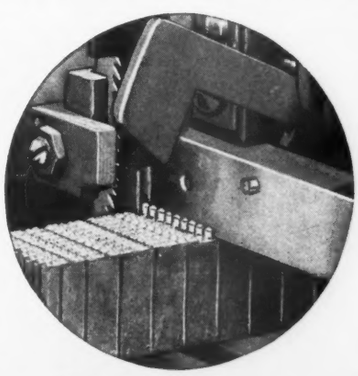


SAWS A FULL GALLEY OF SLUGS TO *Variable* MEASURES IN *35 Seconds*

Though seemingly magical in performance, the Rouse Band Saw is simple, easy and safe to operate.

A galley of slugs, as they come from the linotype machine, is placed on the Rouse Band Saw table top. A single movement of an aligning bar positions the slugs for sawing. The operation is the same whether there are to be many different measures or all slugs are to be the same length.

After the slugs are aligned, they are automatically clamped in position to be sawed to their predetermined lengths. There is no measuring, setting of gauges, or changing of clamps. There is nothing else to do, but press the switch button. The Rouse Band Saw is mechanically fed, and automatically stops when the cut is completed. Only 35 seconds are required to saw a full galley of slugs whatever the length.



Slug length selector.

The aligning device, illustrated in the circle, is the slug length selector, and insures accuracy of cut. The projection on each slug, which is automatically made when the slug is cast, determines the length. Complete details of the Rouse Band Saw operation will be sent upon request and without obligation. There are models for both large and small plants. Send for description and prices NOW.

H. B. ROUSE & COMPANY

2216 NORTH WAYNE AVENUE CHICAGO, ILLINOIS

AUTOMATIC REGISTER CONTROL

For Rotary Web Presses

By W. L. JONES*

Industrial Department, General Electric Co., Schenectady, N. Y.

ON rotary web presses where there are relatively long web lengths between impressions, there is a need for automatic register control. General Electric Company, through the cooperation of a progressive gravure printer and by the coordination of theory and practice, has developed a fully automatic register control.

Most plant operators appreciate the high waste expense in paper, ink, direct labor and press time caused by misregister. They also appreciate the need for uniform high quality printing for reader comfort and advertising appeal. With automatic register control, waste has been greatly reduced, uniform work is obtained, and high operating speeds are maintained.

It must not be interpreted that automatic register control is a cure-all for printing problems. Its purpose is to hold color register automatically for each impression within closer limits than is physically possible by manual observation and adjustment. The results obtained depend considerably on the refinements of press design and the efficiency of press operators.

General Operation

Register marks are printed on the first impression in the web margin. These marks are scanned at each succeeding impression by the photoelectric web scanning heads (3), while at the same time cylinder scanning heads (2) observe the slotted discs (1) direct connected to the copper cylinders.

During the makeready process when all units are set in register by means of the push buttons located at the folder (8), the cylinder scanning heads and discs are synchronized with the web scanning heads. For automatic register control the impulses from the two scanning heads are compared in a "mixing panel" (5) and if register correction is required, the resultant impulse is relayed to the main controller (6) and the register adjusting pilot motor (7) makes a register correction. This pilot motor is mechanically connected to re-position the copper cylinder through the press planetary gear system. In this way, each unit registers with respect to the first impression and is independent of all other units.

Functions of Equipment

During the makeready stage of setting up a job on the press, register is initially adjusted manually by the press operator. After setting register manually, the web scanning head is adjusted so as to be centered on the path of the register marks printed in the margin of the web. The

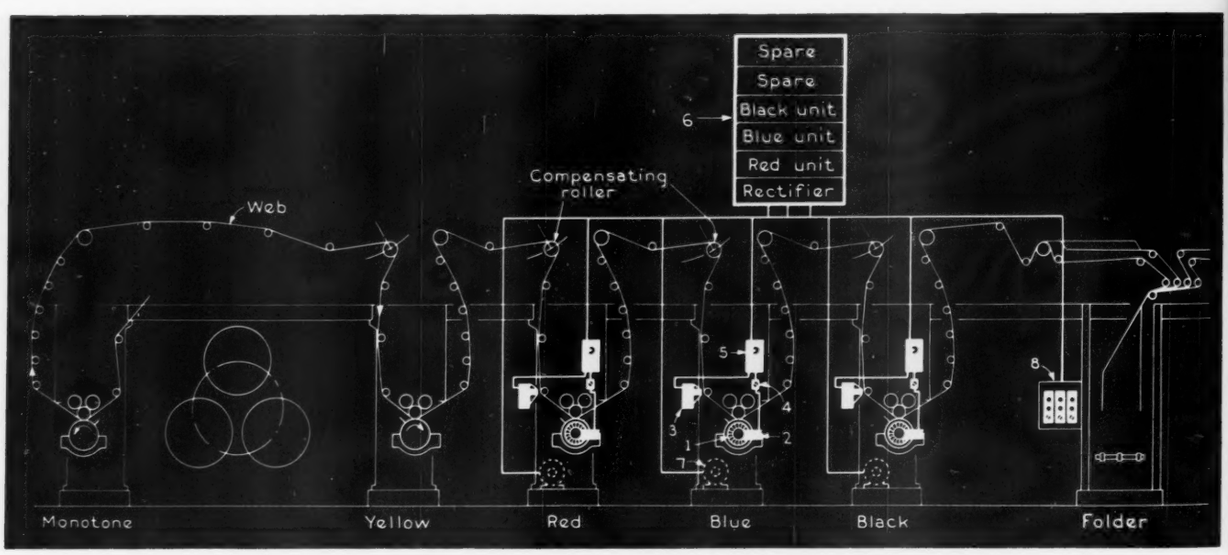
An Invitation

The editor invites you to send particulars concerning any production helps which have been devised in your plant. From time to time other mechanical executives have passed on to our readers ideas developed in their plants so that you may have the benefit.

Don't be formal in telling it—just write it with a pencil on proof paper or have one of the operators set it in type and send proof to

Mack. Sinclair

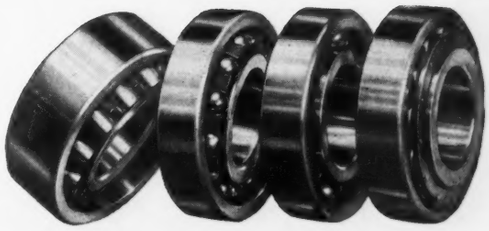
Editor



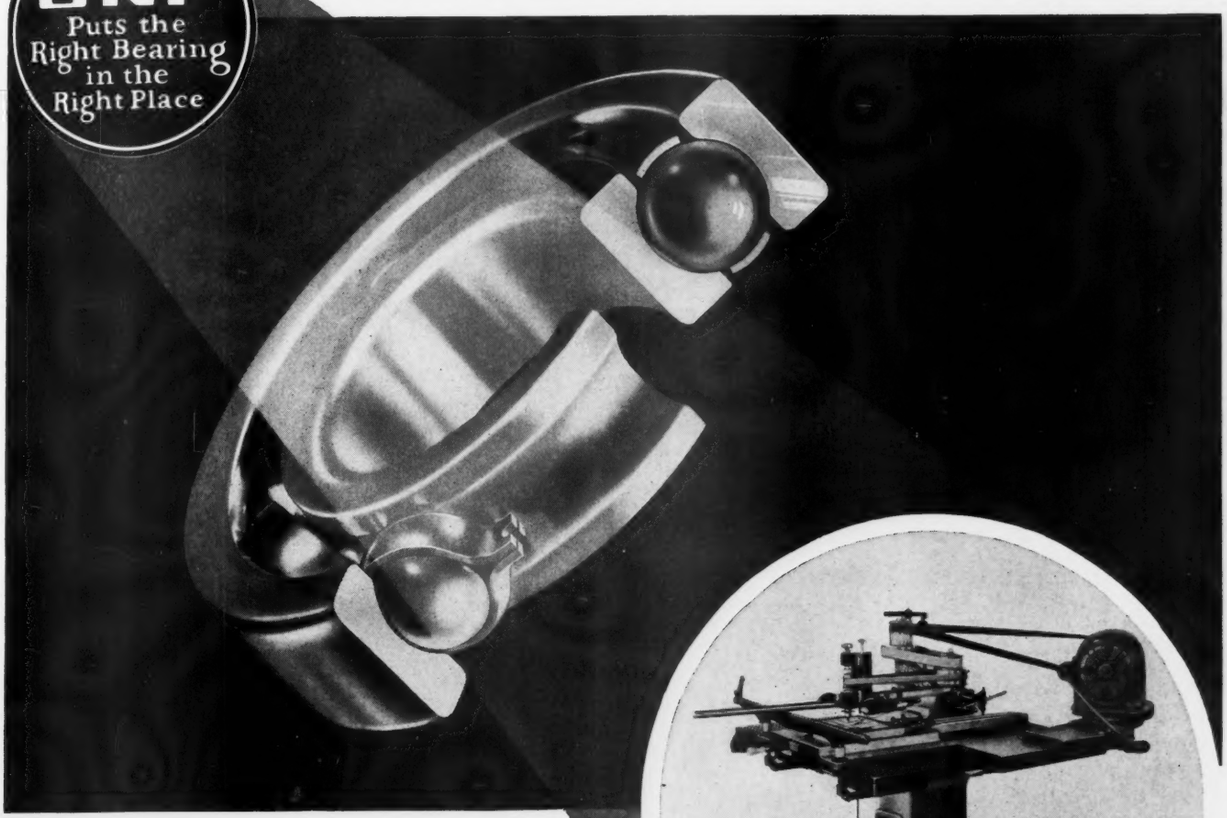
Automatic Color Register Control for Rotary Web Presses. In this diagram is shown a rotogravure printing press with typical control installation with position of electric devices indicated.

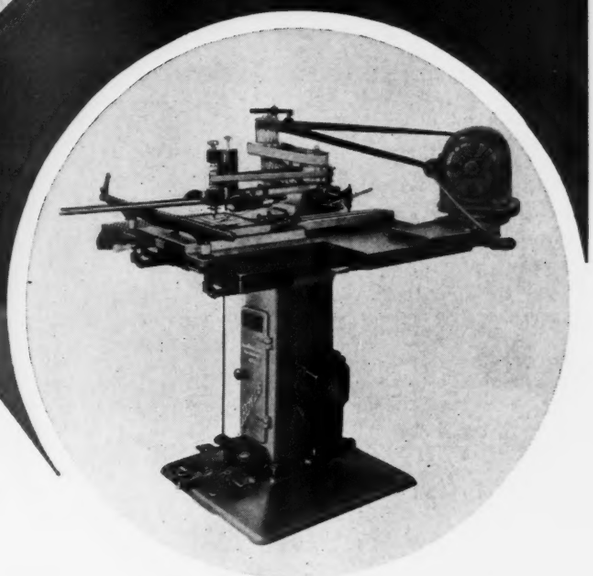
1—Cylinder register scanning disk
2—Cylinder scanning head
3—Web scanning head
4—Selector switch unit
5—Impulse comparison controller with "Magic Eye"
6—Main Controller
7—Register adjusting pilot motor
8—Push button stations for manual adjustment.

ROYLE ROUTS BEARING TROUBLE OUT OF ROUTERS WITH SKF's



SKF Puts the Right Bearing in the Right Place





ROUTING breakdowns and costly delays resulting from bearing trouble out of this Heavy Duty Photoengravers' Router was a simple matter for John Royle & Sons, Inc. They used three SKF Ball Bearings on a cutterhead spindle that runs at speeds up to 25,000 r.p.m., four on the main drive shaft, and two on the pulley shafts.

Step up *your* r.p.m.'s until they hit their peak . . . get all the speed you need . . . but never fail to follow Royle's example in providing the assured accuracy, dependability and almost effortless performance of SKF Bearings. Selecting SKF's is always an important move toward reduced power, lubrication and replacement costs. 4514

SKF INDUSTRIES, INC., PHILADELPHIA, PA.

Built by John Royle & Sons, Inc.

SKF

BALL & ROLLER BEARINGS

cylinder disc scanning head is rotated on its mounting and synchronized with the web scanning head.

The web and cylinder scanning heads will detect a mis-register within very close limits and will apply correction automatically. The purpose of the mixing panel is to compare the time occurrence of impulses from the web and cylinder scanning heads. If these impulses occur simultaneously, the web is in register. However, if there is a time difference between the impulses, the web is out of register, and as the result, a correcting impulse is relayed to the pilot motor.

Holds Register During Mill Splice

From actual experience, it has been found that the equipment will hold register while a mill splice is passing through the press. On a roll splice or paste, register is lost only as long as tension is completely out of control. Furthermore, during the cycles of acceleration and deceleration of the press, the automatic correcting equipment keeps up with changes in tension and holds the register.

It is also found that not only higher operating speeds are obtained, but the pressman is given a greater opportunity to supervise other press functions which affect the operation of the press as a whole in producing higher quality work.

The engineering and research facilities of the General Electric Company have taken Automatic Register Control out of the experimental stage and actual operation has proved it to be an outstanding contribution to the Graphic Arts Industry. Its application to rotary web presses has reduced operating costs through higher operating speeds and reduction in waste, and has given a uniformly higher quality color printing which has greater reader and advertising appeal.

ZERO WAS BELOW...

A Windy Bill Story

By L. H. HOUCK

"GUESS my hardest job was that machine I put up way up there in Alasky." Windy Bill Smith wiped oily hands on a rag as he answered the question. Several regulars, waiting for time to be called, whiled away the intervening minutes listening to tales of the road as told by the machinist of the Wildwood *Daily Record.*

"Here, Button," Windy called his apprentice. "Take this can over to Gordon McKinna, the Monotype operator and tell him to fill it up with some of that castrated oil he uses on them two hootin' nannies."

"Yep. It was up in Alasky." Windy Bill was off.

"You know that Arctic Ocean borders Alasky on the north and a guy with a little paper in a town right on the bank bought himself a machine. I was elected to put it up."

His listeners were all ears. Here were earmarks of a typical Windy Bill adventure.

"No use to tell of the trials and troubles I had getting up there. I got there and got the machine up — but it wouldn't by no means run. I first thought it was the cold — 49 below. The shop had a front winder which faced the west and there is where they put the machine — right in their front winder. There she set, the keyboard faced the west and the pot on the north side was only a few yards from the North Pole.

"I was a twitchin' to be off. First trouble was the mat shifter, the thing that shoves the mats into the distributor box, it wouldn't push 'em all the way in — and they warn't nothin' a holdin' it. Push it all the way in and in ten minutes it 'ud be out in the middle of the second elevator bar. I looked to the rider, the cam and the spring — no dice.

"Then I noticed a wider crack than usual between the second elevator bar and the distributor box bar, so I got out my old ball peen hammer and I peened that second elevator lever back to the south. Before some of you wise guys get steamed up, this was back when it was proper to line up a second elevator by peening.

"I'd been workin' hard all day on that machine and it was late. I decided to go out and have a big moose steak for supper.

"When I got back the mat shifter had worked out again and the second elevator had worked out at least six points. You boys jist can't understand how I felt when I realized I was up against the supernatural. Here I was — thousands and thousands of miles away from home, no friends, no money, a sled and some mangy dogs to take me back — and them damned Eskymoes tapping their fingers on their foreheads and pointin' to me.

"I'd put up hundreds of them machines and hundreds of times when the last screw was in place, I'd wipe me hands and get ready to ride. I'd wrecked Thornes and Simplexes, fixed gasoline engines — but never before nor since was I in so much trouble.

"I run down a line of mats and sent them up. S-L-A-M. They slid into the first elevator jaws like a crash of thunder. No leathers in the air chamber thinks I. Took it apart, found it was all right and put it back together again. Shut off all the air with the little washer on top but that didn't help much.

"Here was the trouble set-up. Second elevator moved to left, mat shifter that roosted most of the time half way out on the second elevator bar and a transfer slide that could not be slowed down.

"The time was getting late. You know the time gets later at the Arctic Circle. Then I found another trouble. The space-bands wouldn't drop. The pawl worked but the bands would not come down. Then was when I really got scared. I could feel that ghostly supernatural force raisin' the hairs on the back of my neck. I'm up against old Aurora Bory Alice, says I to myself.

"That's somethin' you can't fight so I just sat down and looked at that machine. I stared at her. Suddenly I noticed the space-bands were moving to the left — slow, but by gum, they was movin'.

"I watched them bands for exactly four hours and they had moved clear back to the second elevator post.

"Then like a flash I gets it. I runs to my tool box and I takes out my little pinch bar and I started to jockey and scoot that machine around at four o'clock in the morning. I jacked her around until the keyboard faced the south and the step was to the north. And that was the way I solved the world's biggest typesetting machine mystery."

Windy Bill picked up an eraser and started rubbing a handful of dirty mats.

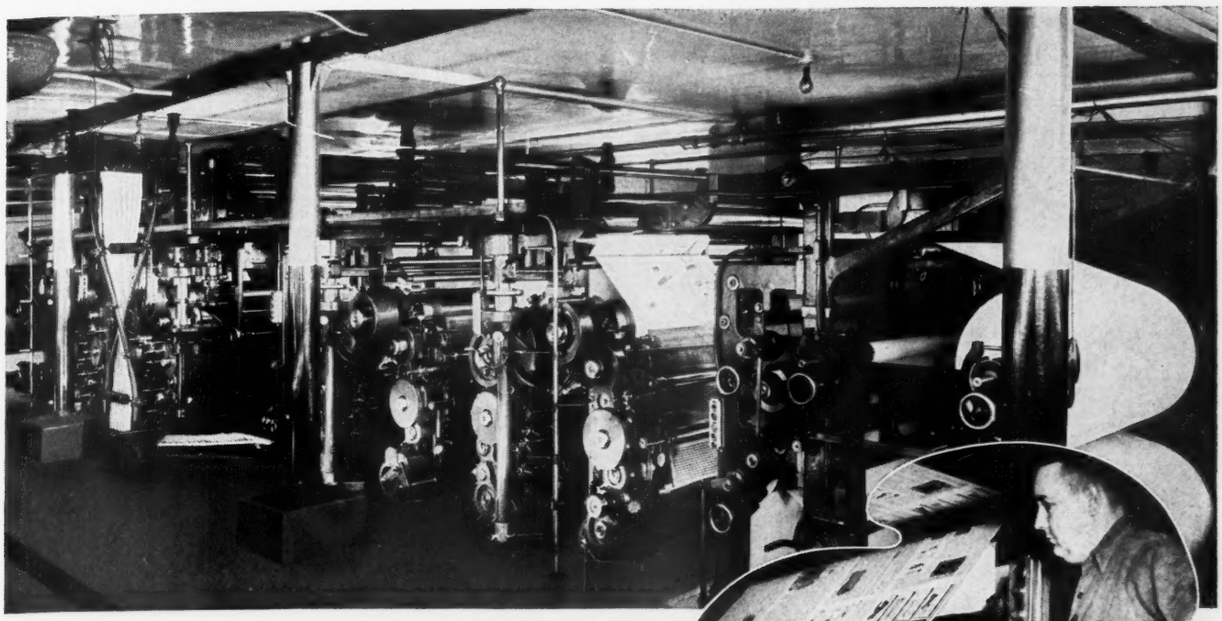
"Whatta yuh mean solved?" Ben Sharpe, veteran of a thousand tussles with first edition deadlines, asked the question.

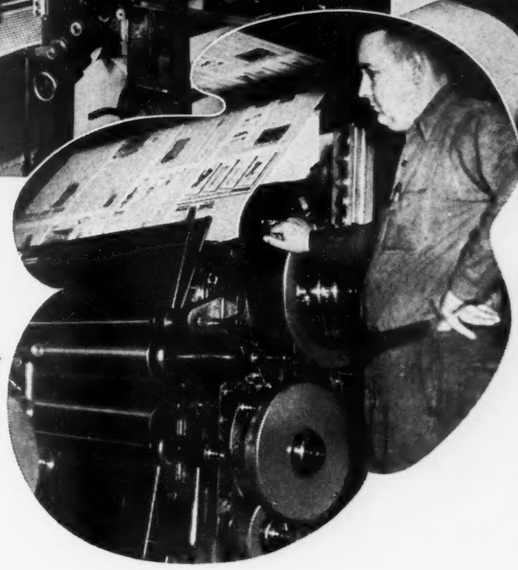
"Huh. Twern't nuthin' but the old North Pole puttin' out her magnetic forces — pulled everything out of line," said Windy Bill. He continued: "So I just turned her around."

Ben Sharpe was not satisfied. "Did that stop all the trouble?"

"Had a little trouble left," Windy Bill admitted reluctantly. "The pull of the Pole made the second elevator slam a little. On your machine now the second elevator rides the cam down by gravity

Trade Name Index *for Mechanical Executives—Use the new Trade Name index (1058 items) published on pages 157-169, 1940 P-Double-E Reference Number.*





When Seconds are Precious—

DAYCOS ARE PRICELESS

While precious seconds are clicking off and big city papers must "hit the street" on time—Daycos are priceless. Dayco "H.S." Solid Rubber Rollers in form position teamed with Dayco "Stayput" Rollers in other positions ease the burden of the pressroom staff as they click off trouble-free mileage on high speed newspaper presses—with no time out for adjustments.

And for smaller types of newspaper presses Dayco "Stayput" Rollers, with the renewable surface which is an integral part of the roller construction, give priceless performance.

Daycos are tough! They're ink and water resisting. There is no ink penetration—no soft spots—no blisters—they need no time out for changes or adjustments. Daycos have the right consistency and affinity for properly distributing and depositing ink. They permit presses to run at top speeds under any climatic condition. And they won't deteriorate in storage.

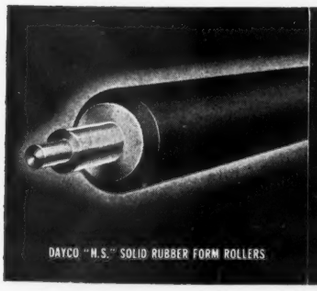
Why not ask for facts and figures which prove how Daycos save precious time and money for large and small newspapers?

Distributed by
GEO. H. MORRILL COMPANY
Division General Printing Ink Corp.
Write to any Branch:
BOSTON • NEW YORK • DETROIT
PHILADELPHIA • MINNEAPOLIS
CHICAGO • ST. LOUIS • FT. WORTH
LOS ANGELES • SAN FRANCISCO
SEATTLE

DAYCO "H. S." SOLID RUBBER AND "STAYPUT" ROLLERS
Made Especially for Newspapers

★ ★ ★

THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO
The Originators and Pioneers of Synthetic Rubber Printing and Lithographic Rollers



Dayco Rollers

The Original Synthetic Rubber (D) Printing and Lithograph Rollers

AND "H.S." SOLID RUBBER ROLLERS FOR FORM POSITIONS

Paper Problems

By LETTER P. OFFGRAV*

Keeping Up With The Papermaker

There seems to be considerable difficulty on the part of printers in keeping up with papermakers on grades and how to evaluate the grades. Something should be done to coordinate or reconcile the substance numbers between bonds, books, boards, bristols and the other kinds of printing papers.

THE first part of the above statement by a production executive can be taken care of by the use of a filing system. Use a card file for the description of the paper, and keep the samples in a larger file, with the location noted on the card. Samples should carry the grade, which, if not on the samples when received, can be obtained from the paper mill or jobber. In this way all papers of the same grade will be found in one file, no matter whether they are brand papers or mill stocks. A cross index system will take care of brand papers. Simply file a card for each, in alphabetical order, with a reference as to the location of the card in the grade file and also the location of the sample.

The sizes used in figuring basis weights for the various printing papers are a development of the use of the papers. Each size used is the most common size required in that paper. Book paper, for instance, is specified in size 25x38 in., which is a common size. Bonds, on the other hand, are specified in 17x22 in., which cuts up into four letterheads 8½ x 11 in., the standard size. It would be a difficult matter to change a custom which not only has some logic back of it but which has also become standardized through usage over a long period of time. It is questionable if such a change would be of any benefit, and it most certainly would result in confusion. Charts and slide rules made for the purpose make it easy to convert from one size to another when required.

**Another on a series in response to problems propounded by mechanical and production executives in a questionnaire sent out by* Printing Equipment Engineer. *Mr. Offgrav will reply to additional problems in future issues.*

and the cam pushes it up to the distributor box."

"I know how it works," answered Ben Sharpe. "But you still had some trouble left didn't you?"

Windy Bill eyed the questioner severely. "You wouldn't be a doubtin' Tommie?"

"Not me," answered Ben, "but if all you've told up to now is true, the second elevator would be held up to the distributor box by the magnetic pull and wouldn't drop down for the transfer."

"Eggs-actly." Windy Bill agreed enthusiastically. "I put the second elevator on the bottom and put the big cam on top of it. The cam pushed the elevator down for the transfer and it went up by magnetic force just like yours comes down by gravity."

Windy Bill went up to Ben Sharpe and shook his forefinger in his face. "Let me tell you something, Ben Sharpe, I can prove everything I tell. That same machine is still running. That machine was traded in and for the last ten years she's been right here on the Wildwood *Daily Record* and you've been running her."

Ben Sharpe retreated in defeat. "That proves the story, all right," he said. He grabbed off a handful of six point copy and started for Old No. 1. "No wonder she runs cold so much," he muttered to himself, "never been thawed out."

The 1940 P-Double-E Reference Issue with the 64-page goldenrod paper section contains revised and up-to-date indexes for printing equipment and supplies. Use the index freely to locate manufacturers of and dealers in equipment and supplies.

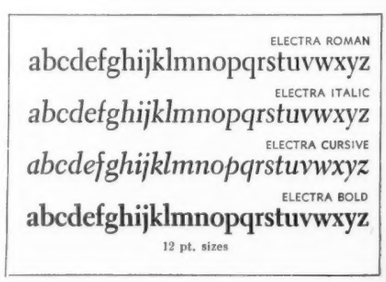
Matrix Contrast

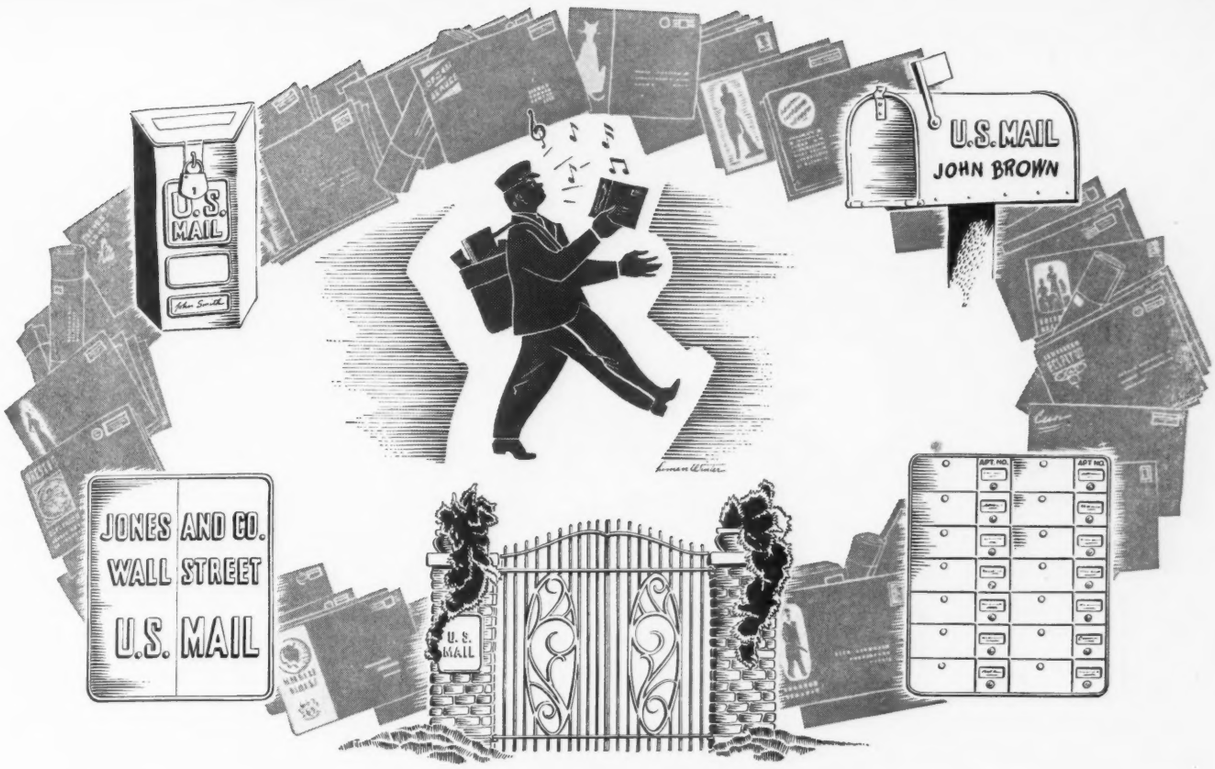
The Philadelphia *Inquirer* has had its line-composing machine matrices serviced by the Matrix Contrast Corporation, including all the matrices used in the *Inquirer's* sixty-four machines.

Other recent installations of this service have been made by the Johnstown *Democrat* and *Tribune*, operating twelve machines; the O'Brien Suburban Press, Norwalk, Conn., operating sixteen machines; the Mail & Express Printing Co., New York, operating five machines; and the Von Hoffman Press, St. Louis, operating nine machines.

Electra Cursive

A new cursive for Electra, the type face designed by W. A. Dwiggins, is announced by the Mergenthaler Linotype Company. Says C. H. Griffith, Mergenthaler vice president in charge of typographic development: "The original companion italic designed for Electra was an oblique form of the roman, and is useful for complete texts of verse and specialized purposes. The oblique, however, obviously lacked contrast when used within texts for emphasis. Electra Cursive was planned to meet that need. Only the lower-case letters need be added to outstanding fonts in use.





For Every Destination there's a CHAMPION PAPER

Good advertising is designed to reach the greatest number of prospects—wherever, whoever, they are. Smart buyers entrust their advertising pieces to good printers, and ask that they be printed on Champion Paper. Champion gets the call because of its greater values. There's a Champion paper or cardboard for almost every printing need. Whether your customer's story goes to housewife, banker, farmer—you can make it look best by using Champion Paper, the foundation for good printing.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI

Color Protection

Many types of foodstuffs are affected by light and heat. Fatty substances in particular are quickly made rancid by the action of light. From the Color Research Laboratory of the Eagle Printing Ink Co. comes information that yellows and greens are particularly favorable. In transparent containers these two colors reduce the harmful action of ultra-violet and infra-red radiation. In opaque containers yellows, white and pale green, because of high light and heat reflection, tend to keep the contents of the package cooler and therefore less likely to cause deterioration. Light colors reflect heat rays; deep colors absorb them.

Represents Ideal

Sam Acker of the Acker Printing Equipment Company is representing Ideal Roller & Manufacturing Company in Wyoming and Colorado. Mr. Acker is located at 1844 Stout Street, Denver. Previously associated for many years with the American Typefounders Company, Mr. Acker is well known in the graphic arts industry in the middle west. He will handle all of Ideal's products in the two states mentioned.

NPJ Sold

The National Printer Journalist, established 1872, has been sold by Williamson Publishing Company, Springfield, Ill., to the Lightner Publishing Company, Chicago. The name will be changed to *The National Amateur Journalist*. The magazine will cater to editors and publishers of school and college publications, club and house organs, community newspapers, church and fraternal magazines, etc., covering the mechanical field of small printing equipment and duplicating machines.

Now With Main Office

Bernard R. Halpern, who for the past two years has been employed by Monotype Corporation, Ltd., in England as a salesman and service man on photo-mechanical equipment, has returned to the United States and is now connected with Lanston Monotype Machine Company's main office in Philadelphia. He will serve as supervisor of photo-mechanical equipment service. Mr. Halpern has had technical training and wide practical experience in the photo-mechanical field.

Prevents Ink Skinning

Anchor Chemical Company announces a new product which is called Inkote. Inkote prevents skinning in the ink can or in the press fountain. It is applied to the ink by spraying with an ordinary gun of the "Flit" type. When ready to use, stir the ink in the unsual manner and start the press. It is asserted that the new product will not affect any color of ink and by its use oil-sheets are eliminated.

Ink Conditioner

Central Compounding Company announces an ink conditioner for use with the synthetic varnish type of ink. Cenco Ink Conditioner is supplied in two types, one for letterpress and one for offset. It is a clear and transparent liquid, being a 100% distilled chemical combination claimed to aid materially in reducing or eliminating picking, sticking, crystallization, mottling, and most of the printing difficulties encountered under humid weather conditions.

Standard Formula

American Type Founders announces that the company has discontinued the manufacture of leads and slugs from its old metal formula. Duratin leads and slugs will be supplied instead.

The Duratin formula contains 4 per cent tin, 11 per cent antimony and 85 per cent lead, the standard formula for new line-slug metal. Duratin leads and slugs, used in plants operating line-composing machines, can be dumped into the melting pot with the slugs to be remelted into pigs.

Speaks in Baltimore

Walter B. Patterson, director of agencies with Mergenthaler Linotype Company, was the featured speaker at the January meeting of the Baltimore Club of Printing House Craftsmen at the Emerson Hotel.

Linotype—Intertype

replacement parts

New Molds, universal and adv. fig. style	$ 55.00	Back Knives	$ 2.00
Back Jaws	10.00	Side Knives, set	13.00
Gross Assorted Screws	1.50	Plungers	4.00
Spacebands	.75	Dis. Box Bars	4.50
Liners, solid style	1.00	Sec. El. Bars	6.40
Rubber Rolls for Keyboard	.60	Vise Locking Screws	3.00
Border Blocks	4.00	Assembler Stars	.09
Transfer Fingers, Improved	.50	Assembler Fibre Buffers	.10
		Watch Oil for Keyboard Cams	.50
		First El. Spring Pawls	.07
		Knife Wiper Flags	.05

REBUILT MATERIAL

Rebuilt Molds (uni. and adv. fig.) ($10 allowance for old)	$ 35.00	Rebuilt Margach Type Feeders	$ 55.00
Rebuilt Mold Disks ($5.00 allowance for old)	35.00	Rebuilt Back Jaws	5.50
Rebuilt Electric Pots	150.00	Rebuilt Sec. El. Bars	4.00
Rebuilt Monomelts	150.00	Rebuilt Dis. Box Bars	2.50
Rebuilt Gas Pots	85.00	Reground Back Knives	1.25
		Reground Side Knives, set	10.00

REPAIRS

Rebuilding Magazines	$25-10	Regrinding Side Knives, set	$ 2.50
Rebuilding uni. and adv. fig. molds	25.00	Rebuilding Back Jaws	4.50
Regrinding Back Knives	.75	Rebuilding Sec. El. Bars	3.50
		Rebuilding Dis. Bx. Bars	1.75

FONTS

Over 300 always in stock. Write for list and proofs. We buy, sell and trade in all kinds of Linotype and Intertype parts.

Free Printer's Apron

With cash order of $10.00 or more mentioning this advertisement and offer.

MONTGOMERY & BACON
TOWANDA, PENNA.

Have you tried the New

AIR SEALED CORK MOLDER

This new blanket is scientifically treated to give improved results and stand up longer

TRY A SET TODAY

SUPERIOR GLUTEX

GUMMED PACKING FELT

Still the leading quality in mat backing Superior Glutex is used more extensively than ever. The highest quality felt available is used with a scientifically prepared coating that sticks quickly and permanently.

Write for Samples

AMERICAN PUBLISHERS SUPPLY
Box 131 WEST LYNN, MASS.

RECENT PATENTS *for printing industry*

Book Binding:

2,182,801. METHOD OF BINDING BOOKS. Philip A. Frazier, Oak Park, Ill. Application January 25, 1937, Serial No. 122,108. 17 Claims. (Cl. 281—21.)

2. The method of fabricating a book, which comprises gathering a predetermined group of signatures, sewing the group of signatures together, joining a pair of end sheets spaced apart the width of the back of the group of signatures by adhesively applying a liner to the inner margins of the end sheets, securing the liner to the back of the signatures and the inner margin of the end sheets to the first and last pages of the group of signatures by means of adhesive, then trimming, rounding and backing the group of signatures and pasting the outer surfaces of the end sheets to the inner surfaces of a casing.

2,183,231. LOOSE-LEAF BINDER. Clarence D. Trussell, Poughkeepsie, N. Y., assignor to Trussell Manufacturing Company, Poughkeepsie, N. Y., a corporation of New York. Application November 16, 1938, Serial No. 240,655. 2 Claims. (Cl. 129—24.)

1. A loose-leaf binder, comprising toggle plates engaging on a common toggle center, the plates being mounted for rocking movement and carrying cooperating ring forming elements, finger levers projecting each from a plate at one side of the toggle center to the opposite side of the toggle center in crossed overlapping relation and having finger grips at the ends of the same spaced in the closed position of the ring forming elements so that the plates may be rocked to the open ring position by pinching the spaced finger grip ends of the crossed finger levers toward each other, the crossing portions of the finger levers having abrupt locking shoulders located intermediate the finger grip ends and the points of attachment of the levers to the plates and disposed to register in the position of the levers in the ring closed position of the toggle plates, one of the locking shoulders being offset from the general plane of the lever carrying the same into the plane of the locking shoulder on the other lever to thereby stand in opposition thereto in the closed condition of the rings and the finger levers being sufficiently yieldable to enable clearance of one locking shoulder from the other being effected by relative twisting movement applied to the finger grip ends of the levers as a preliminary to the pinching action required to impart ring opening movement to the toggle plates.

Composing Equipment:

2,184,111. PRINTER'S TYPE CABINET. Alfred B. Bell, Gardner, Mass. Application October 15, 1938, Serial No. 235,194. 9 Claims. (Cl. 276—45.)

1. A printer's type cabinet having spaced side walls and an open front; guide channels attached to the side walls and inclining downwardly toward the front of the cabinet, each channel having a crosswise stop at the lower end of its bottom flange; shelves engaging corresponding guide channels on the respective side walls, each shelf having correspondingly allocated spaced notches in its side edges capable of being selectively engaged over the end stops on the bottom flanges of the corresponding guide channels; and a plurality of type chutes mounted on each of the shelves.

2,184,898. COMPOSING ROOM SAW. Frederick W. Seybold, Westfield, N. J., assignor to American Type Founders, Incorporated, Elizabeth, N. J., a corporation of New Jersey. Application May 21, 1936, Serial No. 81,069. 6 Claims. (Cl. 29—69.)

1. A machine including in combination, a table having a slot formed therein, a saw adapted to cut in a plane parallel and adjacent to the slot, a slide slidable in the slot, an abutment rigid with the slide and means to clamp work to be operated on by the saw against the abutment comprising a structure movable as a unit and slidable on the slide and having a member adapted to contact the work on the side opposite the abutment, means to yieldingly force the member against the work and hold the member against retrograde movement including a clamp lock plate associated with the structure having a wedge-shaped recess, means to lock the plate against movement relative to the slide including a roller in the recess and yielding means forcing the roller toward the shallow part of the recess.

Feeding, Folding, Delivery:

2,181,241. PAPER SHEET FEEDING MECHANISM. Rudolf Klemm, Leipzig-Plagwitz, Germany, assignor to Gebruder Brehmer Maschinenfabrik, Leipzig-Plagwitz, Germany. Application June 29, 1938, Serial No. 216,611. In Germany July 6, 1937. 19 Claims. (Cl. 271—52.)

1. Paper sheet feeding mechanism comprising in association with a stationary horizontal sheet feed table a guide rail for directing the sheets thereover and arranged to be adjustable thereto, a series of rotary members parallel with the guide rail and adapted to present to the sheets a train of consecutive substantially horizontal rotating surfaces aligned with the guide rail and operated to urge the sheets along and towards the guide rail, a corresponding series of rolling bodies in individual co-operative contact with corresponding rotating members in front of the guide rail, means for adjusting the rolling bodies relatively to the axes of the rotary members and also independently longitudinally of the guide rail, thereby enabling the points of contact between the rotating members and their co-operating rolling bodies and accordingly both the contact forces of the sheets with the rail and the feed speed of the sheets to be controlled at will.

2,182,435. SHEET FEEDING MECHANISM. William F. Huck, Richmond Hill, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application July 25, 1935, Serial No. 33,142. 17 Claims. (Cl. 271—20.)

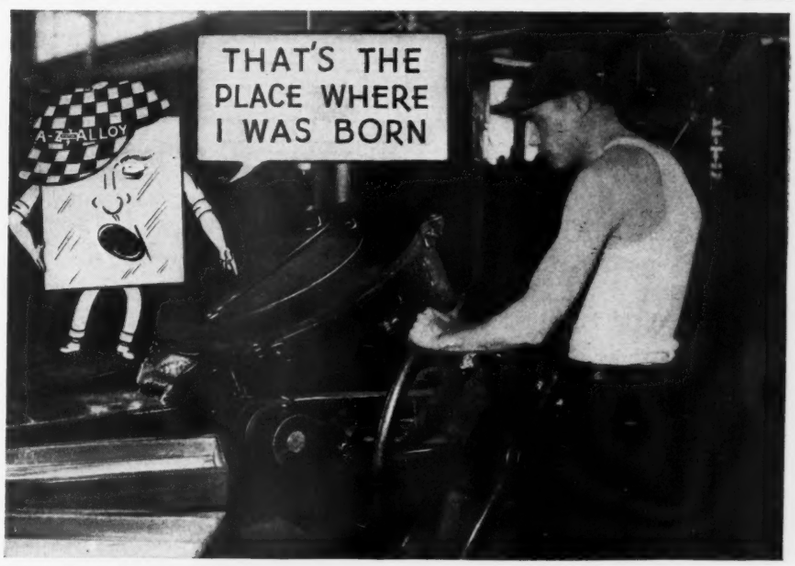
1. In a sheet feeding mechanism for printing machines, means for supporting a pile of sheets, means engaging the vertical edges of the sheets for buckling upwardly a plurality of sheets located at the top of the pile so that the degree of buckling of each sheet is progressively increased as the sheets are located progressively nearer the top of the pile, and a suction head movable to engage the top buckled sheet of the pile and convey it from the pile towards the printing mechanism of the printing machine.

2,182,595. SHEET FEEDING MECHANISM. Abraham Novick, Flushing, N. Y., assignor to F. L. Smithe Machine Co., Inc., New York, N. Y., a corporation of New York. Application December 4, 1937, Serial No. 178,037. 6 Claims. (Cl. 271—62.)

1. In a sheet feeding mechanism having means for removing sheets singly from the top of a stack whose top is at a predetermined operative level, the conbination of a sheet supporting elevator and alternative elevator driving means, the one automatically effecting minute upward adjustments of the elevator within the range of the operative level as sheets are withdrawn from the stack, and the other for quickly and continuously moving the elevator upward from a remote loading position to raise the top of the stack to the operative level, and means operativeiy connecting the two driving means to the elevator comprising separate pawl devices arranged so that either pawl device may remain operatively associated with the elevator but ineffective while the other is effective, the connecting means also in-

PATENT PAPERS

Printed copies of patents are furnished by the United States Patent Office at 10 cents each. Address the Commissioner of Patents, Washington, D. C. and enclose 10 cents for each patent paper wanted.



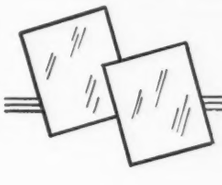
It's the *Electric Stirring Action* that assures uniformity

A-Z Alloy is proud of his birth place—and well he may be, for the electric induction furnace occupies a prominent place in printing and engraving history. It is the controlled electric heat in this furnace which is responsible for the uniformity of A-Z Alloy and Zomo Electric Zinc.

The electric induction furnace thoroughly mixes the elements into a perfect alloy. And, in addition, this method assures a perfect casting temperature. The metal cannot vary more than 5/100ths of one percent from the ideal formula.

Engravers who demand that their metal be good from A to Z, all through the coming year, should choose A-Z Alloy for long direct printing runs or heavy mat duty, and Zomo Electric Zinc for all regular work.

You can order A-Z Alloy, and Zomo Electric Zinc, plain or BACKOTED, from leading metal suppliers in the United States, Canada and England.



ZOMO ELECTRIC ZINC

A-Z ELECTRIC ALLOY

"How Many Advertising Inches Is This Going To Cost?"

MECHANICAL executives are familiar with the reactions of the Old Man when they approach him with a request for new equipment of one kind or another. Perhaps one mechanical executive never may have heard of reactions taking place in other printing plants. Most of these replies sift down to the expected savings which are to be made as the result of the installation of the requested material. Sometimes there isn't any saving to be made since the new equipment is needed to relieve congestion caused by increased production volume, or maybe the old machine just won't percolate any more.

Mechanical Superintendent T. P. Cantwell of the Greenville (S.C.) *News-Piedmont*, tells how Publisher Roger C. Peace replies to his requests for equipment. His reply is to the point: "How many inches of advertising is this going to cost?"

All mechanical executives have learned that they should be prepared to answer questions when requests for equipment are made. The publisher naturally wants to know why the proposed equipment should be purchased, how much it will cost and what it will save in operating costs. The wise executive will have prepared himself to answer these and other questions before making his request for additional equipment or a trade-out of old equipment.

cluding a clutch common to the two driving means, and means for disengaging the clutch for enabling the elevator to be disconnected from both driving means simultaneously.

2,183,128. SHEET FEEDING APPARATUS. Leonard Baker, Hillsdale, N. J., assignor to Dexter Folder Company, New York, N. Y., a corporation of New York. Application July 2, 1938, Serial No. 217,199. 14 Claims. (Cl. 271—62.)

1. In a sheet feeder, a pile elevator, a housing, a driving shaft in the housing, a gear loose on the driving shaft and rotatable independently, a driven shaft in the housing and connected with the pile elevator, a pawl and ratchet mechanism on the driven shaft, means for connecting the pawl and ratchet mechanism with and operating it from the loose gear on the driving shaft, an intermediate shaft in the housing and connected with the loose gear on the driving shaft, and means for driving the intermediate shaft from the driving shaft, whereby the driven shaft may be rotated intermittently in one direction by the loose gear and the pawl and ratchet mechanism to intermittently raise the pile elevator.

Miscellaneous:

2,181,690. HEATING MEANS FOR PLATE CYLINDERS OF ROTARY PRESSES. Donald L. Boyd, Huntington, W. Va., assignor to Carb-O-Spot Corporation, Athens, Ohio. Application November 30, 1938, Serial No. 243,089. 7 Claims. (Cl. 101—216.)

7. In a press, an inking mechanism comprising an ink fountain and a printing mechanism comprising a plate cylinder in cooperation with the inking mechanism; heating means for the mechanisms consisting solely of a fountain heater and radiant heating means externally adjacent the printing mechanism.

2,183,786. KNIFE-SHARPENING MECHANISM FOR CUTTING MACHINES. Frederick J. Clark, Buffalo, N. Y., assignor to Eastman Machine Company, Buffalo, N. Y. Application May 9, 1938, Serial No. 206,752. 11 Claims. (Cl. 51—246.)

1. In a cutting machine, the combination with a knife which has a substantially upright cutting edge and is reciprocated substantially in the lengthwise direction of the edge, of knife-grinding flexible abrasive band-means arranged to contact opposite sides of the edge portion of the knife, a carriage supporting the grinding means, means for moving the carriage and grinding means lengthwise along the knife edge, two laterally spaced apart shafts extending from the carriage upwardly parallel with the knife edge and movable up and down with the carriage, supporting and driving pulleys for the band-means fixed directly on the shafts, a gear train comprising pinions to each of which one of the shafts is slidably connected to rotate with and move axially of the pinion, a motor, and a belt drive mechanism operatively connecting the motor with the gear train for rotating the shafts.

2,183,788. KNIFE-SHARPENING MECHANISM FOR CUTTING MACHINES. Frederick J. Clark, Buffalo, and Carl F. Hilgeman, Williamsville, N. Y., assignors to Eastman Machine Company, Buffalo, N. Y. Application March 26, 1938, Serial No. 198,298. 11 Claims. (Cl. 51—246.)

1. In a cutting machine, the combination with a knife having a substantially upright cutting edge and which is reciprocated substantially in the lengthwise direction of its edge, of knife-grinding means comprising flexible abrasive band means arranged to contact opposite sides of the edge portion of the knife, a supporting carriage for the grinding means, drive mechanism for the grinding means comprising two shafts extending side by side above the carriage parallel with the knife edge, a power-operated driving motor geared to the shafts, a pair of shafts extending downwardly from and slidable lengthwise of and driven by the first two shafts, a pulley fixed directly on each of the slidable shafts and engaging the flexible band means for driving the same, and means for moving the carriage with the grinding means and last mentioned shafts lengthwise along the knife edge.

Plate Making:

2,182,559. PHOTOGRAVURE PRINTING PLATE AND METHOD OF AND APPARATUS FOR PRODUCING THE SAME. Charles L. Henderson, Appleton, Wis., assignor to Paper Patents Company, Neenah, Wis. a corporation of Wisconsin. Application October 16, 1936, Serial No. 105,852. 6 Claims. (Cl. 95—5.7.)

1. An etched intaglio printing surface having in its printing surface ink receiving recesses of substantially uniform depth and of area varying in accordance with the tone depth in the subject to be reproduced, the recesses being substantially rectangular in outline and substantially corresponding in location and arrangement to both the black and the white squares of a black and white checkerboard, the surface having continuous, solid, un-etched portions separating all of the recesses and providing a continuous surface over which a doctor blade may ride, the un-etched portions being in the form of two perpendicularly intersecting sets of spaced, parallel, continuous lines of material of sufficient width in the portions of the surface corresponding to the deepest tones of the subject to support a doctor blade and varying in width in the other portions of the surface substantially inversely proportional to the tone depth of corresponding portions of the subject, so that the full range of tones in the subject may be reproduced.

2,182,802. METHOD OF MAKING PRINTING PLATES AND THE PRODUCT THEREOF. Philip A. Frasier, Oak Park, Ill. Application August 31, 1937.

1. As a new article of manufacture, an integral printing plate comprising a thin metallic shell having areas requiring different printing pressures to print evenly, the surface of the areas requiring additional printing pressure being elevated above the other areas, and a backing of resilient yielding material, filling the back of the shell and permanently secured to the shell.

2,183,524. BLACK PRINTER FOR PHOTOMECHANICAL PROCESSES. John A. C. Yule, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N.Y.

9. In a photomechanical process for reproducing a multicolored original, the method of making a black printer which comprises illuminating the original with white light comprising the three primary colors, exposing respectively to the three primary colors from the original, three photosensitive surfaces whose responses are directly in accordance with the intensities of the respective primary colors incident thereon, blocking the two lesser responses by the greatest of the three responses and forming at each point on the printer in accordance with the greatest response, a printing density proportional to the density of the corresponding point of the original with respect to the predominant primary color of that point of the original.

2,183,525. BLACK PRINTER. John A. C. Yule, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y.

1. For use in a four-color photo-mechanical process corresponding to a three-color process in which the blue-green, magenta and yellow printers have respective printing transparencies at corresponding points with values Tbg, Tm, and Ty, a black printer whose printing transparency at each corresponding point is

$$\sqrt[N]{T_{bg}{}^{N}+T_{mN}+T_{y}{}^{N}}$$

when N is a number greater than 1.

16. In an electro-optical system carrying three primary color signals in separate channels for color reproducing, the method of making a black printer including the step of forming a black printer signal which step comprises amplifying an equal portion of each of the three primary color signals by an Nth power amplifier where N is a number greater than 1, adding the amplified signals linearly to form a combined signal and amplifying the combined signals by a 1/N power amplifier to give a black printer signal, the step of operating a light valve by this signal and the step of forming a black printer separation record in accordance with the response of the light valve.

2,184,221. PLATE HOLDER AND CARRIAGE FOR PHOTOGRAPHIC LETTERING MACHINES. Alexander T. Koppe, Hasbrouck Heights, N. J., assignor to General Printing Ink Corporation, New York, N. Y.

1. In a photographic lettering machine, in combination, a longitudinally movable carriage for an alphabet plate, the carriage being provided with transversely movable carriers for supporting an alphabet-plate-holder receiving means, means for moving the carriers, and interengageable stud and socket devices carried at both ends of the carriage and at both ends of the carriers, for moving the carriers to, and locking them in, a definite predetermined position, and manually operated means extending lengthwise of the carriage for simultaneously operating the stud and socket devices.

2,184,222. APPARATUS FOR LOADING AND UNLOADING A PHOTOGRAPHIC LETTERING MACHINE. Alexander T. Koppe, Hasbrouck Heights, N. J., assignor to General Printing Ink Corporation, New York.

1. In a photographic lettering machine, in combination with image projecting means positioned on the outside of a dark room, carrier means for light sensitive material loadable and unloadable in the dark room, before and after exposure, and movable back and forth between the dark room and the lettering machine, and means for moving the carrier and the light sensitive material in a direction parallel to the optical axis of the lettering machine, to an exact focal position, after the carrier and the light sensitive material have reached an approximate focal position in the lettering machine.

2,184,223. LETTER PROPORTION VARYING DEVICE Harold A. Horman, Lyndhurst, N. J., assignor to General Printing Ink Corporation, New York, N. Y., a corporation of Delaware. Application August 14, 1936.

1. In a photographic lettering machine, the combination with a character bearing plate, a camera lens and a source of light for projecting a beam of light through the character plate and lens onto a sensitized surface, of a bracket positioned to one side of the path of the beam of light, between the character plate and the sensitized surface, means for variably positioning the bracket in a direction substantially parallel to the beam of light, a lens holder for holding a lens in the path of the beam of light, a cylindrical lens in the lens holder, means for detachably securing the lens holder to the bracket so as to be movable therewith, and to be quickly attachable to and removable from the bracket, and means forming a light tight box positioned between the lens holder and the camera lens.

Printing Presses:

21,300 (Re-Issue) TWO-REVOLUTION CYLINDER PRINTING PRESS. Albert Edward Pearsall, Vancouver, British Columbia, Canada. Original No. 2,088,808, dated August 3, 1937, Serial No. 59,052, January 14, 1936. Renewed June 16, 1937. Application for reissue April 7, 1939, Serial No. 266,705. 9 Claims. (Cl. 101—173.)

5. The method of printing three colours at each operation of a two revolution flat bed press, consisting of the steps of feeding a sheet to be printed to the impression cylinder of the press, bringing the sheet into printing engagement with three separate forms successively during one revolution of

A Laboratory Product

BURGESS Chrome MATS

Try 'em all-compare the results. You won't find a mat on the market that has all the qualities of Burgess Chrome Mats.

209

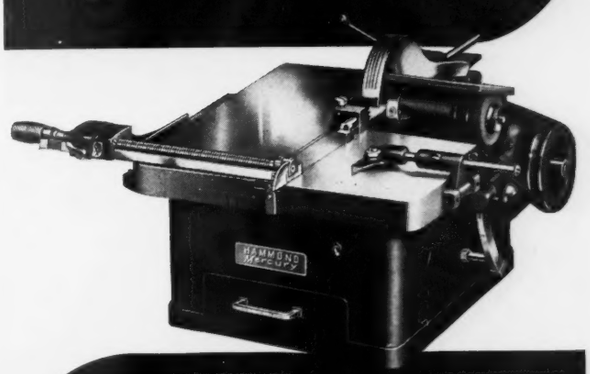
BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess *Chrome* and *Tone-Tex* Mats

FREEPORT • • • ILLINOIS

Pacific Coast Representative
RALPH LEBER CO.
426 Polson Bldg. Seattle, Washington

IT'S HERE!



THE NEW MERCURY BENCH SAW

by Hammond

★ Here's a real bench saw trimmer. It has exactly the same features and will do every one of the same operations as the new floor model Mercury TrimOsaw.

★ You can saw, trim, miter, inside and outside mortise, undercut, rabbet, square plates and saw down to 8 points with the Bench Mercury.

★ Precision built, it carries the regular Hammond 5 year guarantee. With wider scope of operations and greater accuracy, the Bench Mercury will rapidly pay for itself at its low price.

WRITE

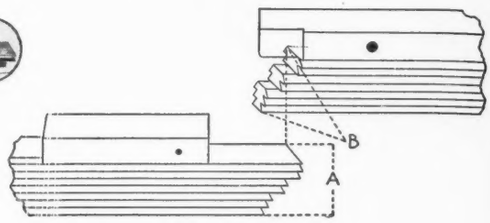
for prices, terms, literature and tradein allowances. No obligation.

MERCURY FLOOR MODEL

The newest Hammond TrimOsaw in the medium-price field. Extreme accuracy, speed and ease of operation make it an outstanding value. Investigate NOW.

Hammond Machinery Builders INCORPORATED
KALAMAZOO, MICHIGAN, U.S.A.
1604 DOUGLAS AVENUE

Improved Second Elevator Bar and Distributor Box Bar



Matrice Wear Reduced

In the conventional type the two bars must be set slightly apart to prevent breakage thru contact. The result is a *gap* that wears out the matrice combinations passing over them.

Since our improved bars can be set very closely together without incurring damage to the ends—this wear and tear on matrice combinations is materially reduced.

The saving in this direction alone justifies immediate replacement with these new bars, even if the old ones are still in operative condition.

CIRCULAR ON REQUEST

Breakage Eliminated

Because of the *Three-Step, Tapered Ends* it is virtually impossible to break the rails of either the Second Elevator or Distributor Box Bar. This means a saving in replacement cost.

Do You Know of Any Belts That Have Run For Five Years? Ace Belts Have!

LINOTYPE PARTS COMPANY

CHICAGO 318 West Randolph St. | 203 Lafayette Street NEW YORK, N. Y. | 314 West 10th Street KANSAS CITY, MO. | MINNEAPOLIS 503 Fourth Ave. South

DENVER — 1441 Blake St.

the impression cylinder, one of which forms is carried by the flat bed of the press, and applying ink of a different colour to each of the forms respectively.

9. A device for multiple colour printing on two revolution flat bed presses, comprising an impression cylinder, at least three form members for imprinting a sheet carried by the impression cylinder, and means adapted to be actuated by operation of the press for moving each of the form members into printing engagement with the impression cylinder simultaneously, and means associated with each of the form members for applying ink thereto.

2,181,714. PRINTING PRESS. David D. Vandercook, Evanston, and Otto C. Geffken, Chicago, Ill., assignors to Vandercook & Sons, Chicago, Ill., a copartnership consisting of Robert O. Vandercook, Edward O. Vandercook, David D. Vandercook, and Frederick R. Vandercook. Application July 18, 1938, Serial No. 219,696. 5 Claims. (Cl. 101—354.)

1. In a printing press of the type described, a form inking roller and a supporting frame in which the roller is journalled, wheels on the roller engageable with rails on the press bed, the wheels being primarily dimensioned to cause rolling engagement of the form roller with a form on the press bed as the wheels roll along the rails during bodily travel of the roller supporting frame, a distributing roller above the form roller having inking engagement therewith, supporting wheels for the distributing roller resting on the form roller wheels, and means for positively rotating the distributing roller at a speed which will tend to cause the distributing roller wheels to rotate the distributing roller in synchronism with the form roller and to cause the distributing roller wheels to maintain the rolling engagement of the form roller wheels with the rails to prevent slippage of the wheels on the rails.

2,181,894. MEANS FOR REGISTERING PRINTING MACHINE CYLINDERS. William F. Huck, Richmond Hill, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application August 12, 1936, Serial No. 95,505. 13 Claims. (Cl. 101—248.)

9. In a printing machine, a cylinder, a driven member, means operably interposed between the cylinder and driven member to drivingly connect the driven member to the cylinder and including a pair of elements, one of the elements being axially movable and engaging the driven member and the other element rotatably mounted upon the axially-movable element and cooperating to axially move it, the axially-movable member being supported for movement with the cylinder and engaging the driven member so that axial movement of the axially-movable member rotatably adjusts the cylinder and the driven member relative to each other, a gear connected to the rotatable element, a pair of pinions drivingly connected to the gear, the axis of the pinion being in alinement with the axis of the cylinder, a gear being mounted for rotation bodily about the axis of the pinion, separate brake means for selectively engaging the pinions, means to selectively actuate either of the brake means to prevent rotation of the pinion connected thereto, and yieldable means operably interposed between the cylinder and driven member to constantly bias the axially-movable member into engagement with the driven member.

2,181,895. REGISTERING MECHANISM FOR PRINTING CYLINDERS. William F Huck, Richmond Hill, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application September 10, 1937, Serial No. 163,166. 18 Claims. (Cl. 101—248.)

17. In a printing machine having a form cylinder mounted for adjustment axially and rotatively, a gear mounted in axial alignment with the cylinder and held against axial movement with respect thereto, and driving means connecting the cylinder and the gear, including adjustable means adapted to rotate the gear in one direction with respect to the cylinder and resilient means tending to rotate the gear in the opposite direction, to prevent backlash in the driving means.

2,182,367. INKING MECHANISM FOR ROTARY INTAGLIO PRINTING MACHINES. Adolph M. Zuckerman, New York, N. Y., assignor, by mesne assignments, to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application May 25, 1934, Serial No. 727,556. Renewed May 5, 1939. 33 Claims. (Cl. 101—157.)

1. The method of inking an intaglio printing cylinder, which consists in rotatably mounting the cylinder in a chamber, communicating the chamber with an ink reservoir, pumping ink from the reservoir to the chamber, controlling the quantity of ink supplied to the chamber independently of the quantity of pumped ink, maintaining a predetermined quantity of ink in the chamber, rotating the cylinder in the ink to deposit a film of ink thereon, and scraping the surplus ink from the surface of the cylinder.

9. In a printing machine, an ink fountain, a rotatable intaglio printing cylinder operable in the fountain, the fountain housing the major portion of the cylinder, independent means external of the fountain for rotatably supporting the printing cylinder, movable means for supporting the fountain for movement towards and away from the cylinder, and fountain components removable to open the fountain to permit the movement of the fountain away from the cylinder.

2,182,760. WEB SUPPLY MECHANISM FOR PRINTING MACHINES. Albert J. Horton, White Plains, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application December 7, 1935, Serial No. 53,315. 28 Claims. (Cl. 242—58.)

1. In a web supply mechanism adapted to join a running web to the web of a replacement roll, an actuation restrained web deflecting device, an actuation restrained web severing device, and common means operable first to release and permit actuation of the web deflecting device to join the webs and again after the join is made to release the web severing device.

22. In a web supply mechanism, in combination, a restrained swingable device mounted to engage and deflect a running web toward a rotating replacement roll when released, a manually movable member, means to connect the member to the device including a spring, the member when moved in one direction being adapted to tension the spring to impose a pull upon the device to swing it toward the replacement roll, and means to release the device.

2,183,045. PRINTING PRESS. Leroy Q. Presby, Melrose, Mass., assignor to American Stay Company, East Boston, Mass., a corporation of Massachusetts. Application June 9, 1938, Serial No. 212,732. 8 Claims. (Cl. 101—181.)

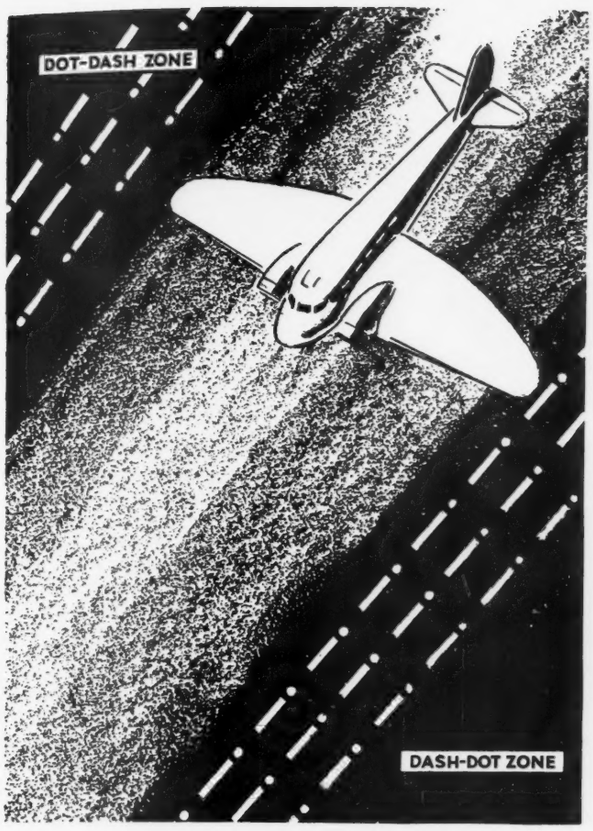
1. A printing press having, in combination, a printing couple comprising a printing cylinder, means comprising a longitudinally slidable shaft coaxial with the cylinder for adjusting the cylinder lengthwise, a lever for sliding the shaft, means for swinging the lever about an axis transverse to the shaft comprising a screw-threaded rod member and cooperating nut member, means pivotally connecting one of the members to the lever, a part carried for swinging about an axis parallel to the axis of swinging of the lever, the other of the members being supported by the part for rotation about an axis transverse to the axis of swinging of the lever, and means for rotating the last mentioned member.

6. A printing press having, in combination, a plurality of spaced independent printing couples through which a web is adapted to pass successively, each of which couples comprises a printing cylinder, a common driving means for all of the printing cylinders, separate means at each of the couples for adjusting the printing cylinder thereof axially and rotatively relative to the driving means independently of the printing cylinders of each of the other couples, the separate means each comprising a rotary actuating member, and a separate means for operating each of the actuating members, which means extend from the several couples to a common station past which the web, being operated upon by the couples, is adapted to pass after it has been operated upon by all of the couples; and separate means, comprising closely adjacent manually operated members at the station, for operating the means which operate the actuating members.

2,183,222. INTAGLIO PRINTING PRESS. Hans J. Luehrs, Westerly, R. I., assignor to C. B. Cottrell & Sons Company, Westerly, R. I., a corporation of Delaware. Original application May 27, 1937, Serial No. 145,111. Divided and this application October 8, 1937, Serial No. 168,017. 2 Claims. (Cl. 101—153.)

1. In an intaglio printing press unit, a base, an ink fountain therein, side frames uprising from the base, bearings in the frames, a design cylinder, its shaft removably mounted in the bearings, ink fountain cover members hinged on the base and coacting with the cylinder to close the fountain, and means imparting a vertical movement to the cylinder shaft for removing from or inserting the shaft in the bearings when the cover members are opened.

2,183,720. INKING MECHANISM FOR PRINTING MACHINES. Frederick Grafton Lougee, New Malden, England, and Albert J. Horton, White Plains, N. Y., assignors to R. Hoe & Co., Inc., New York, N. Y., a



CONTROL

When today's big airliners streak across the sky on split second schedule, they are riding radio beams. The pilot is continually on the alert for that continuous hum in his earphones that means he is on his course. If he deviates to one side, the signal changes to dash, dot—dash, dot. If he veers to the other side, the signal is dot, dash—dot, dash. In either case he must bring his plane back into the radio beam to fly straight to the landing field without difficulty. This is control to a high degree.

Imperial Type Metal has worked type metal control, also, to a high degree. Monthly analysis of your metal by the Imperial Type Metal Co. working under the Imperial Plus Plan is bound to keep your type metal on the right course. It cannot vary one way or the other without Imperial knowing it and correcting it. Thus, Imperial takes full responsibility for the condition of your type metal and gives to you a service that is invaluable to any type metal user. Let Imperial control your metal. Switch today to Imperial.

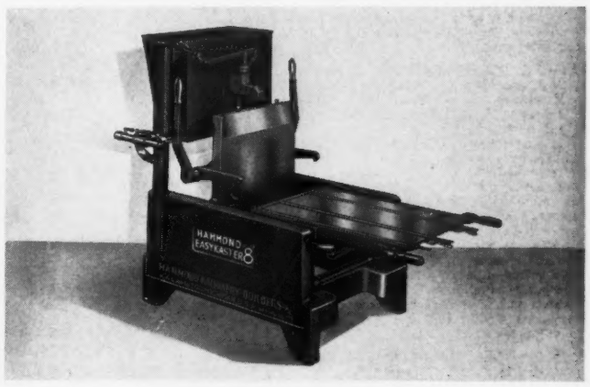
Imperial

IMPERIAL TYPE METAL COMPANY

Philadelphia • New York • Chicago • Los Angeles

MAKING GOOD

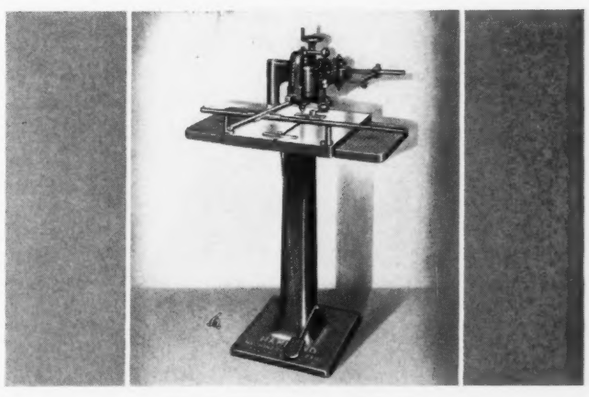
IN HUNDREDS OF PLANTS



Hammond EasyKaster "8" with and without 800 pound valve pouring melting pot . . .

WHY? . . . because the Hammond EasyKaster "8" is a giant and a brute. And withal, it really reduces the number of uneven plates and it handles with Glider-like ease. Ask our users . . . they are confirming this every day.

WHY? . . . because the R-3 Hammond Router has what it takes at less than half the price. It's both a radial and straight-line router and is as sensitive as a feather. Ask our users about the amazing value the R-3 represents.



Hammond R-3 Radial Router with Straight-Line Feature

WRITE for prices, terms, descriptive matter, lists of users and trade-in allowances. No obligation.

Hammond Machinery Builders INCORPORATED

KALAMAZOO, MICHIGAN, U.S.A.

1604 DOUGLAS AVENUE

corporation of New York. Application August 25, 1937, Serial No. 160,792. 25 Claims. (Cl. 270—5.)

23. In combination with a printing machine, a plurality of printing units, each unit having a printing member and an ink supply mechanism, each ink supply mechanism having means to feed ink to any one of a plurality of areas on the printing member and including separately adjustable parts for varying the amount of ink fed by each of the means, an electrically operated device for each ink supply mechanism adapted to adjust each of the adjustable parts, a plurality of electrical circuits to each of which a device of each mechanism is connected, and a disconnecting switch operable to interrupt the circuits simultaneously.

2,183,739. PRINTING PRESS. Curtis S. Crafts, Oak Park, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a corporation of Illinois. Original application September 15, 1933, Serial No. 689,512. Divided and this application January 6, 1936, Serial No. 57,681. 10 Claims. (Cl. 101—350.)

1. In an inking mechanism for printing presses, the combination of ink drums and bearings for rotatably supporting them in a frame, means for vibrating the drums, a plurality of oil cups communicating with the bearings and arranged at different levels, means for circulating oil and supplying it to certain of the uppermost cups and means for conducting the overflow from the uppermost cups to the remaining cups.

2,184,725. PRINTING PRESS. Anton Stobb, Elizabeth, N. J., assignor to American Type Founders, Incorporated, Elizabeth, N. J., a corporation of New Jersey. Application February 10, 1939, Serial No. 255,747. 10 Claims. (Cl. 101—409.)

1. In a printing press, in combination, a supporting frame, an impression cylinder, a gripper shaft oscillatably mounted in the cylinder, and cylinder grippers on the shaft adapted to be actuated to clamp a sheet to be printed and to release the printed sheet for delivery from the cylinder, automatic actuating means for the grippers comprising a tumbler member on the shaft adapted to oscillate therewith to and from its opposite limits of movement in gripper opening and closing directions, a pair of alternately operative studs slidably mounted in the frame adjacent the cylinder and adapted to be alternately projected into the path of the tumbler member to swing it in opposite directions, and means actuated by the tumbler member for automatically actuating the studs.

2,184,785. GRIPPER CYLINDER FOR PRINTING PRESSES. Burt F. Upham, Grimsby, Ontario, Canada. Original application March 11, 1938, Serial No. 195,378. Divided and this application July 21, 1938, Serial No. 220,533. 8 Claims. (Cl. 271—53.)

1. An impression cylinder of minimum diameter for printing presses having all its surface available for printing except the gripper gap; a gripper shaft mounted in the gap; and a pair of tumblers on the shaft adapted to be engaged by fixed pins disposed adjacent the periphery of the cylinder to open and close the grippers during each revolution of the cylinders.

2,184,522. WEB CUT-OFF. Henry B. Greenwood, Glenarm, Md., assignor to F. X. Hooper Company, Inc., Glenarm, Md., a corporation of Maryland. Application November 18, 1936, Serial No. 111,395, Renewed June 3, 1939. 8 Claims. (Cl. 164—68.)

5. In a cut-off mechanism for a plurality of webs for cutting sheets of independently adjustable lengths from the respective webs, means for feeding the webs in planes diverging from a point of slitting the feed being constant, a plurality of cutting heads one for each web, the heads being arranged in the direction of feed and each head comprising two rotary cutters of relatively short and long radii respectively means consisting entirely of circular gears for driving the cutting heads, means for adjusting the speed of the cutters at the time of cutting to the speed of the web and means for varying the number of cutting cycles of each head per unit of time relatively to the feed thereby varying speed of each head above and below a mean speed at which the cutters move at uniform speed throughout the cutting cycle, the long radius cutter of one head and the short radius cutter of the other head being between the webs, the long radius cutter of each head being above the short radius cutter of that head and the head having its short radius cutter between the webs being nearest the point of slitting.

Use More Rubber Plates

Sales of rubber products to the printing industry, reports the *Wall Street Journal*, have been increasing because of the rapid development of the molded rubber plate. During 1939, sales of rubber printing plate materials are expected to have increased approximately 50% over those for 1938. Rubber manufacturers do not make plates themselves, but supply unvulcanized rubber suitable for specific applications, and other materials, and instruct platemakers and printers in making and handling the plates.

Of the supplies sold to platemakers, about one-third go into the manufacture of molded plates for letterpress printing. In 1940, the volume of rubber used in letterpress plates probably will be double the 1939 total, the trade estimates.

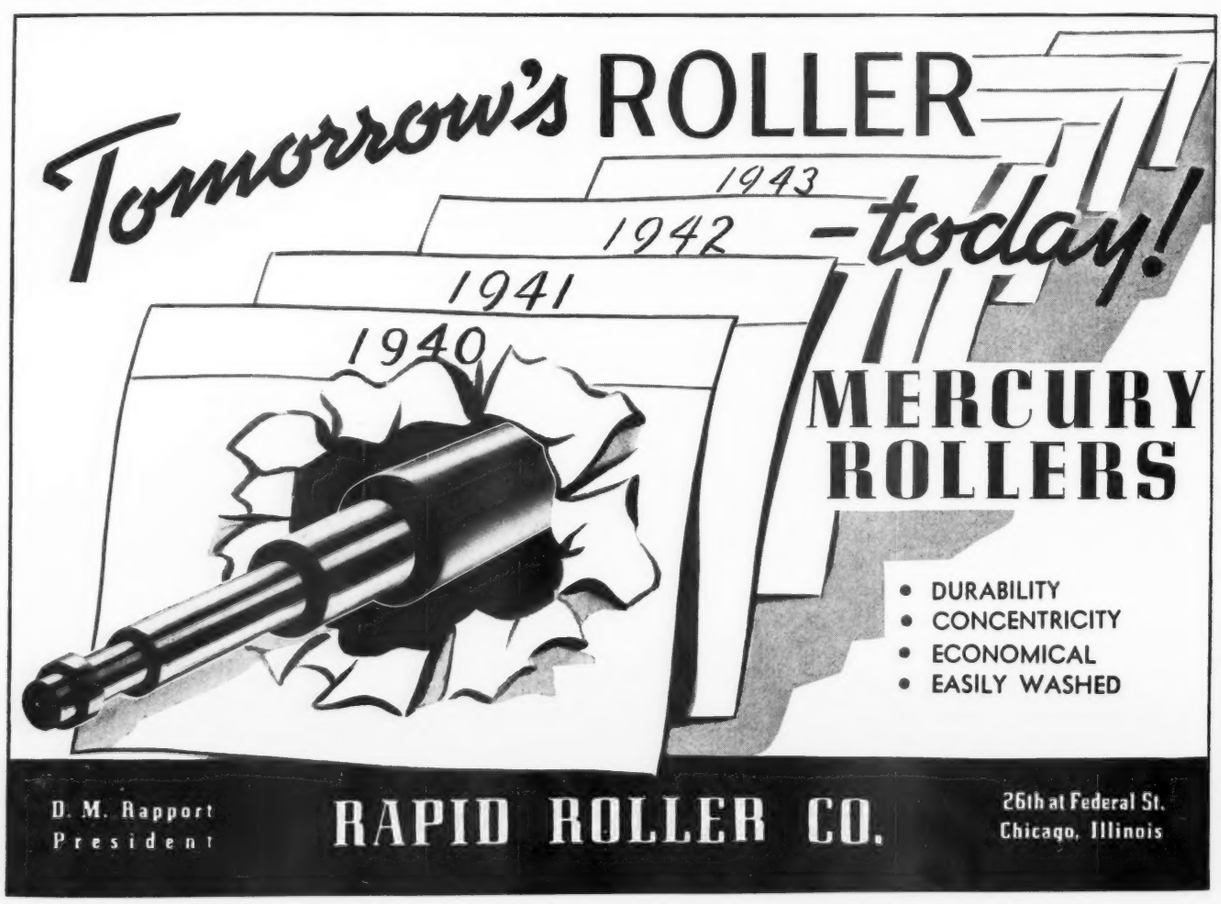
Rubber compounds and other materials for making various types of rubber printing plates are being produced by Goodrich, Goodyear, American Wringer and United States Rubber.

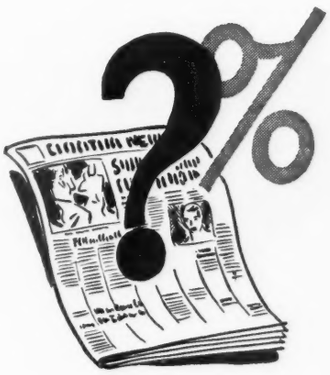
Matrix Cabinet Folder

Ludlow Typograph Company has issued a new folder, size 9 in. by 12 in., illustrating the company's Universal Matrix Cabinet. The folder, which is set in members of the Ludlow Karnak family, is printed in three colors with the cabinet pictured in color on the front page. Features of the cabinet are described and illustrated in detail. Copies of this folder will be sent on request. Ludlow Typograph Company, or in care of *Printing Equipment Engineer*.

Starts Operations

Southland Paper Mill, near Lufkin, Tex., was scheduled to start manufacture of newsprint from Southern pine this month. Entire output for next five years has been contracted for by Southern publishers. Mill is said to be first one to make newsprint from Southern pine. Technical discussion about handling the new product will take place at the Western Division S.N.P.A. Mechanical Conference, Dallas, Feb. 19-20.





The Vital Figure That Nobody Knows

For every newspaper, there exists a readership factor which, if it could be ascertained, would reveal what percentage of his paper the average reader peruses. Above total figures, this factor determines the effectiveness and prosperity of a paper. Certified Mats contribute to a high factor of readership.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION

9 Rockefeller Plaza, Dept. M
New York, N. Y.

Certified
DRY MATS

Name © 1936

ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots. Stand-A-Lone Holders 2 for 25c, per doz. $1.00.

Cost Conscious Executives

watch the little as well as the big things in production to minimize costs and promote operating efficiency.

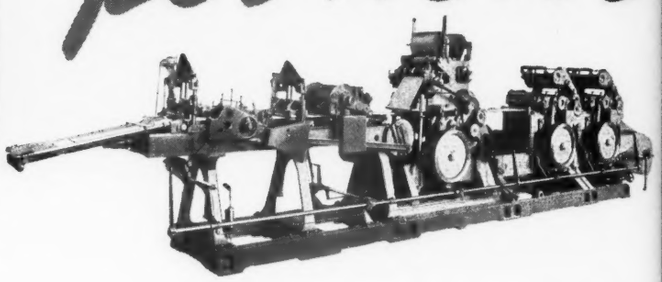
- **Booth's Zink Cut Cement** is the shortest route to satisfactory cut mounting.
- It is the most economical method.
- This cement will eliminate the Old Man's irritating questions respecting lost or misplaced cuts in editorial or advertising matter.
- Stereo shell casts, electros, zinc, copper, rubber and plastic cuts are held to wood or metal bases with the grip of a tiger's paw.

Foreign Distributors:
SEARS, LTD.
Toronto, Montreal, Winnipeg, Vancouver, Canada
JUNGER & JUNGER
Goteborg, Sweden

E. A. BOOTH
RUBBER COMPANY
364 ROCKEFELLER BUILDING · CLEVELAND, OHIO

7500 MULTI-COLOR IMPRESSIONS per hour

LABELS, TICKETS, TAGS
REGISTER FORMS (continuous Zig-Zag Folds, etc.)
AND GENERAL COMMERCIAL PRINTING



NEW ERA Flat-Bed Platen Presses are unit-built and can be assembled to print from one to five or six colors, or more, on one or both sides of a web of paper, cardboard, or cloth (either cotton or silk).

Attachments are available for slitting, punching, perforating, cutting, scoring, and numbering, and for re-enforcing and eyeletting tags, all in one operation. The finished product is delivered either sheeted, rewound, or zig-zag folded, as required.

Built in six sizes, from 6x6 to 13x38 inches. Write for particulars.

Pictured above is a NEW ERA Flat-Bed Web Press — similar to the machine you saw at the recent big Graphic Arts Exposition, New York, where it printed a three-color circular (including a three-color process plate) at a constant speed of 7500 three-color sheets per hour. For large profits on difficult printing and finishing requirements — and for the solution of many SPECIAL printing problems — investigate the...

NEW ERA MANUFACTURING COMPANY
375-P 11th Avenue Paterson, N. J.

NEW ERA
FLAT-BED WEB PRESS

Adjustable Sliding Work Table

The body of the new Amsco Zephyr composing room saw-trimmer is finished in dark olive green enamel with red trim. Some features of this saw are as follows: The toggle type workholder will hold work down to 1 pica in length. Quick acting spiral worm gauge has capacity up to 100 picas and can be set to ½ points. The saw blade and trimmer head are easily removable because of a cutout at the rear of the sliding table. The saw spindle runs on high speed ball-bearings. When the trimmer head is lowered for straight sawing, a trap door drops into place so as to provide an unobstructed table for handling large plate or base work.

A feature of the Amsco Zephyr Saw Trimmer announced by American Steel Chase Company, is a work table brake working in conjunction with the ball bearing sliding work table. The brake is adjustable to determine the amount of pressure necessary to push the work table ahead when cutting materials. The brake mounted in the top of the base consists of a segmentary gear working against a toothed rack in the work table. The friction exerted against the segment is finely adjustable to regulate the force necessary to push the table without overthrow.

The surface of the work table is 17 in. by 22 in. Goose-neck lighting fixture provided. Motor is ⅓ h.p.

P-Double-E File No. 1 Z

Lighting Unit

The Flex-O-Lite Company announces the introduction of a new Flex-O-Lite Lighting Unit for industrial and commercial use.

The feature of this Unit is its light which approaches true daylight; light output and 5,000 hours life. Objectionable glare and deep shadows are eliminated; eye strain and early fatigue are avoided. Objects are said to appear in natural colors without distortion.

Two units are available, one with single tubular lamp or with two tubular lamps. The reflectors measure 58 in. by 8 in. by 8 in. The current consumption of 110-120 watts respectively will give two to three times the light of incandescent lamps using the same current; power factor 90%; lumens per watt 40; lamp life 5000 hours.

The lamps and the reflectors are manufactured by the Flex-O-Lite Company.

Visits Agencies

C. H. Griffith, vice-president in charge of typographic development with the Mergenthaler Linotype Company, Brooklyn, is taking a swing round the country to visit Linotype agencies in Chicago, San Francisco, Los Angeles and New Orleans.

At left: View of Flex-O-Lite Lighting Unit. Objects in natural color without distortion.

ATTENTION STEREOTYPERS

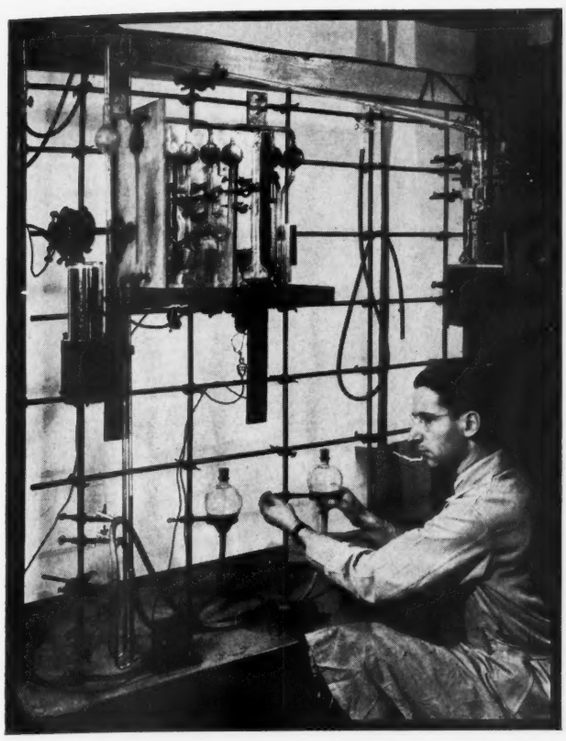
Hundreds of stereotypers are getting perfect molding and stereotype mats through the use of **Franklin Apex Combination Molder** and the **Franklin Klean-print Molding Blanket.** Write today and let us send you samples and complete information on these products.

RUSSELL PRODUCTS COMPANY
702 Harrison Building, 15th and Market Sts. Philadelphia, Pa.

NEWSPAPER PRESS AND EQUIPMENT

● For sale by owner, Rebuilt Hoe X Pattern Sextuple Press with two Automatic McMullen, color ink fountains, Rubber Rollers, Electric Paper Hoist, D. C. Motors, Control Switch Board and complete stereotype equipment. Big bargain. For further details write The North American Press, 728 North Seventh Street, Milwaukee, Wis.

Keeping IPI in Touch



MAN AT WORK—This complex piece of apparatus is used to measure the vapor pressure of vehicles used in making IPI's quick-drying inks (like Vaporin). This is only one small part of the work that goes on in IPI's seven-story building devoted entirely to research. Ink manufacturing is not only a craft, but a science!

MERRY CHRISTMAS 1940—We want to tell you about some new steel die stamping inks that will make it easier to produce 1940 Christmas cards, among other things. These new inks have excellent flexibility and adhesion; they can be printed satisfactorily even on difficult papers and glazed stocks. They dry quickly, and their coverage is unusually good. If you do steel die work, order some of these new inks *now*.

FLAMEPROOF FLAGS—The latest request for something novel in inks came to our Cincinnati branch. A flag company asked them to produce a flameproof ink for printing flags. After testing a number of formulas, a suitable ink was developed, and the customer was well satisfied with its non-combustible properties. We can usually solve special ink problems, but don't forget our regular products—ready-to-use, uniform Everyday inks for instance, developed for the commercial printer.

The Pure Food and Drug act seems to imply that inks should be edible, if not tasty, although vitamin content is not specified.

INTERNATIONAL PRINTING INK

DIVISION OF INTERCHEMICAL CORPORATION, DEPT. P. E. J., 75 VARICK STREET, NEW YORK

The **VITAL LINK**

IN THE CHAIN OF PERFECT REPRODUCTION

WOOD DRY MATS — ALWAYS UNIFORM

True indeed that a chain is as strong as it's weakest link! And the part a dry mat plays in newspaper reproduction is an important one! When it's a WOOD MAT, you can be sure of unfailing performance . . . reproducing highlight and solid, middletone and halftone with dependable accuracy and faithfulness to detail. Try a sample lot today.

For

WHITE HIGHLIGHTS • SOLID BLACKS
TRUE HALFTONES & MIDDLETONES
DEEP MOLDS • CLEAN PLATES

WOOD DRY MATS

For twenty-five years the standard of quality among stereotypers who demand the best in mats. America's first domestic dry mat!

25th ANNIVERSARY — WOOD DRY MATS — WOOD FLONG CORPORATION

WOOD FLONG CORP.

HOOSICK FALLS • NEW YORK

"TRU-MOLD"
CORK MOLDING BLANKET

TRUER TYPE BOWLS + TRUER, BLACKER SOLIDS

A finer plate can be produced by using Eastern's new "TRU-MOLD" cork molding blanket. It is scientifically compounded for the perfect balance between density and resiliency, giving full depth type bowls and clean, even solids.

"Place a trial order today"

"FLECTO"
GUMMED BACKING FELT

RECOMMENDED BY STEREOTYPERS EVERYWHERE

Coated with glue that will not slip or leave the matrix under heat. Tears easily. Made in gauges .025, .030 and .035—Sheets 18 in. by 24 in., and gauges .040, .045 and .050—Sheets 18 in. by 22 in. Cut into strips without charge.

"Free samples on request"

EASTERN NEWSPAPER SUPPLY
9603 NORTHERN BLVD. CORONA, N. Y.

Airoperated Process Unit

An airoperated process unit to prevent offset on freshly printed sheets, has been announced by Paasche Airbrush Company. The unit is designed for use with small presses and for treating sheets up to 30 in. width.

This streamlined unit is a self-contained one-gun gravity feed airoperated unit and is equipped with a ⅓ h.p. portable air compressor, delivering 2.2 cu. ft. at 35 lbs. pressure.

View of Paasche Air-operated Process Unit.

Unit is supplied with pop-off safety valve; water, oil and dirt separator; copper cooling coils; rubber wheels with locking brake and cord and plug.

Food-Store Advertising

A 36-page handbook on setting food-store advertising has just been published by Mergenthaler Linotype Co. Title is *Food-Store Ads From the Linotype Keyboard.* Published to serve as a reference book to mechanical superintendents, composing room foremen, operators and markup men in newspaper plants and in job plants setting that kind of composition. Its pages contain ninety-one styles popular in food-store work. Copies may be obtained from any Linotype agency, or by writing direct to Linotype headquarters, at 29 Ryerson Street, Brooklyn.

Rubber Plate Data

Discussing all the important technical angles about rubber plates, The B. F. Goodrich Company has published a new eight-page catalog section on its printing rubbers. The section is illustrated with typical examples of work printed from rubber plates, and with sketches showing plate construction and pictures of equipment and methods used. Copies are available upon request from the company direct or through *Printing Equipment Engineer.*

Increases Capacity

The addition of a second story to the factory of Vandercook & Sons is devoted to offices, the design department, and a specialized library on precision printing processes.

The second floor is equipped with air conditioning system of the sealed type, with automatic temperature and atmospheric control. Furniture and fixtures are modernistic. Air conditioning dif-

fusers are a new type, located in the sound proof ceiling.

Space on the first floor, formerly occupied by the offices and design department, are now devoted to added manufacturing space, the Vandercook School of Proving, and a locker and rest room for the factory employees.

Flexrock Company has issued a new 64 page booklet entitled *Handbook of Building Maintenance.* The booklet discusses care and repair of concrete floors, treatment and care of all kinds of floors and the covering and care of roofs. Copy gratis to all printing executives.

1890 *Happy New Year* **1940**
TO OUR FRIENDS EVERYWHERE

50 Years Ago, Francis McDonald Sinclair and Theodore S. Valentine founded our Company to render a service to the Graphic Arts such as they saw the need for in a rapidly growing industry. Through the years we have developed and expanded this service which is now available throughout this country and many other parts of the world. Our nearest Branch is fully equipped to serve you.

Sinclair & Valentine Company
INK MAKERS TO THE AMERICAN GRAPHIC ARTS INDUSTRY SINCE 1890
Service from Coast to Coast
Main Office and Factory: 603-611 W. 129th St., New York City

ALBANY	DALLAS	DAYTON	MANILA
BIRMINGHAM	KANSAS CITY	SEATTLE	PHILADELPHIA
BOSTON	NEW ORLEANS	NASHVILLE	SAN FRANCISCO
BALTIMORE	JACKSONVILLE	NEW HAVEN	LOS ANGELES
CLEVELAND	CHICAGO		HAVANA

ROTARY PRESSES

Equipped with

WETTER

Number Better

Locking time is reduced and fine adjustment is facilitated by exclusive features of Wetter Rotary Numbering Machines. Interchangeable, too, for right angle or parallel operation. Deeply engraved figures, accurately turned to cylinder sizes, insure better work.

WETTER NUMBERING MACHINE CO.
246 LOGAN STREET, BROOKLYN, NEW YORK

AIN'T THAT GABRIEL PRESSBLANKET.....THE INTERNATIONAL NEWSPAPER SUPPLY COMPANY'S REPRESENTATIVE ??
YEAH....HE'S S'POSED T'BE SELLING I.N.S. PRODUCTS TODAY BUT HE SAYS WHY WASTE TIME SELLING THINGS THAT SELL THEMSELVES !?
IN
THE PRIN LTD.
FEEL ING

PRESS BLANKETS

INTERNATIONAL NEWSPAPER SUPPLY CO.

75 WEST STREET • • NEW YORK

CABLE — 'THEINS' NEW YORK

Where Is It Made?

CONSULT THE

P-Double-E

Equipment and Supplies Indexes

(Contained in the goldenrod paper section . . . December, 1939 issue)

KLEAN-O-MAT
PROCESS

Quick, Efficient, Safe, Machine Method of Cleaning Matrices in the Magazines.

Write
KLEAN-O-MAT CORP.
60 East 42nd St. New York

LUBRICATED FOR LIFE
LARGE OR SMALL
There is a PULSOLATOR system for automatically lubricating every type and size of printing press.
Customers write that Pulsolator
"Increases press productive time 3.3%"
and
"Reduces oil consumption 60%"
At your request our engineer will call and demonstrate how Pulsolator obtains these savings.
Write for Bulletin B-30
RIVETT LATHE & GRINDER INC.
Brighton, Boston, Mass.
Automatic oil lubrication
BLANCHARD PULSOLATOR

BOOKS
RECEIVED

Estimating Graphs For Printers

Bound in 16-page, 8½ in. by 11 in. size, and printed on heavy white paper, Fred W. Hoch has published *Estimating Graphs For Printers*. Says the author: "This is a new, simple, concise method of figuring accurate printing costs based on economic industry cost values, and is an important step in stabilizing printing prices.

Introduction to the booklet states that simplicity has been given preference over strict accuracy when only a few cents difference has permitted a substantial saving of time in the estimating operation. There are some entirely new methods used. For instance, machine composition, both slug and Monotype (keyboard) have only one price for running pica cost per line for all sizes of type 6 to 14 pt. This innovation has simplified the operation considerably with a minimum effect on the total cost when compared with previous methods based on per M ems or square inches. Since the graphs are based on cost values, the user must always add a fair profit before quoting selling prices.

Explanations for use appears on each graph. The user need consult only one point to find the total cost value for makeready and running any sheet size from 9 in. by 12 in. to over 38 in. by 50 in. for one or two-color presses. The same procedure is followed in the binding section where complete costs are found at one point in the graph.

Graphs in the booklet cover Hand set composition cost per line all type sizes, Slug machine composition costs per line, Monotype keyboard and caster costs per line, Page makeup cost, Press lockup cost per form, Makeready and running economic cost per M sheets Classes A, B and C, Black ink cost per M impressions, Complete binding costs for upright books up to 10 in. by 7 in., Cutting costs per thousand cut pieces (500 sheets to lift), Machine folding (Cleveland, mechanical feed), Right-angle folding.

Estimating Graphs for Printers, by Fred W. Hoch, available at 461 Eighth Ave., New York, N. Y. $3 per copy.

Opens Detroit Office

C. S. ("Tommy") Tompkins of the Tompkins Printing Equipment Company, Chicago, opened a new office for the company at 545 West Larned St., Detroit, in January, with a miniature Graphic Arts Show. A number of printing equipment manufacturers' equipment was on display. Among the firms represented were Chandler & Price, F. P. Rosback Co., Paasche Airbrush Co., Vandercook & Sons, Acme Heaters, W. S. Warnock Co., H. B. Rouse & Co., Hammond Machinery Builders, and others. The Tompkins Company plans to cover Michigan and Ohio out of the Detroit office, and Illinois, Indiana and Wisconsin out of the Chicago office. The company is national distributor for the Leslie paper conditioner.

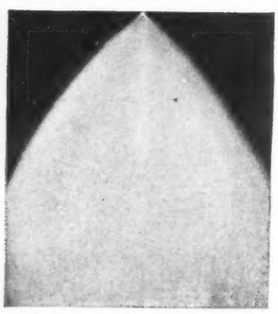
Mr. Tompkins returned recently from a trip to Europe. He discussed his trip before the Detroit Club of Printing House Craftsmen at the December meeting.

Symposia Planned

The clinical plan will be the keynote of the Nineteenth Annual Conference on Printing Education, to be conducted by the National Graphic Arts Education Guild at the Rochester Athenaeum and Mechanics Institute, Rochester, New York, next summer.

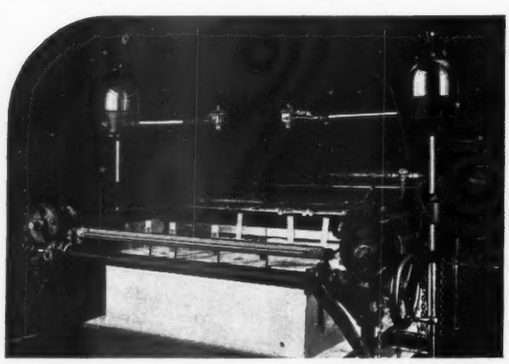
Lists of questions covering matters pertinent to teachers of layout, type composition, related subjects and presswork were distributed to the 600 members of the Guild. These lists will be the bases for discussions to be conducted by the members themselves at the Rochester meeting.

R. Randolph Karch, local conference chairman and regional vice president, announced that all local printing teachers will form a committee to conduct the conference.



New Economy . . .

New ATF GUN operates by Air!



No electrical parts . . . entirely operated by air, the new ATF Diafram Gun is more efficient and economical than even the famous original ATF Gun. It saves on mix and electricity and has fewer working parts to wear out. Yet it has all the advantages of finer adjustments of the old Gun. Lighter and more compact, it is easily moved from press to press and takes up less space. The ATF Diafram Gun blasts a single drop into thousands of particles . . . forming an evenly distributed film of protection against offsetting, sticking, smudging. Whether on offset or letterpress, the new ATF Diafram Gun will give you a better job for less money. Ask your ATF Salesman for the complete details.

Types used: Bodoni Family

American Type Founders

200 Elmora Avenue, Elizabeth, N. J. *Branches in Principal Cities*

In Twenty-Two Weeks

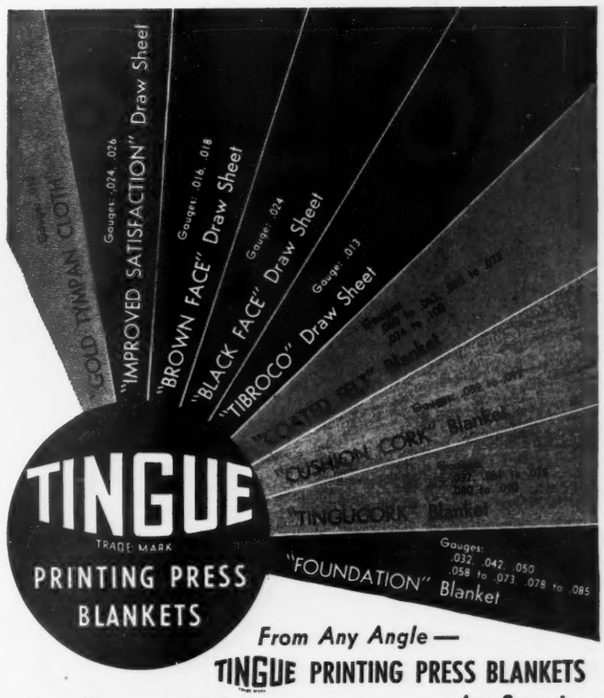
44

FORM-O-SCORCH

Machines were installed in plants where more efficient matrix preparation was wanted. FORM-O-SCORCH offers finer results at reduced operating cost.

Available on Approval
write for details

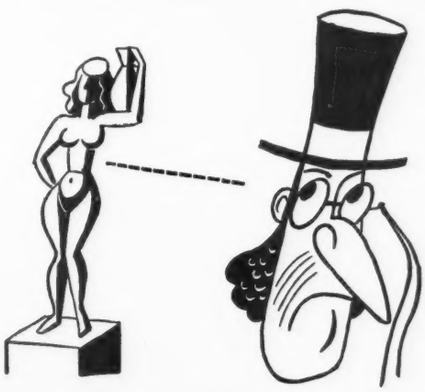
AMERICAN PUBLISHERS SUPPLY
BOX 131 WEST LYNN, MASS.



From Any Angle —
TINGUE PRINTING PRESS BLANKETS
— Are Superior

Stocked in gauges listed above.
Samples and detailed prices upon request.

TINGUE, BROWN & CO.
114-120 East 23rd St NEW YORK N Y
1227 Wabash Ave CHICAGO ILL.
723 East Washington Blvd LOS ANGELES CAL



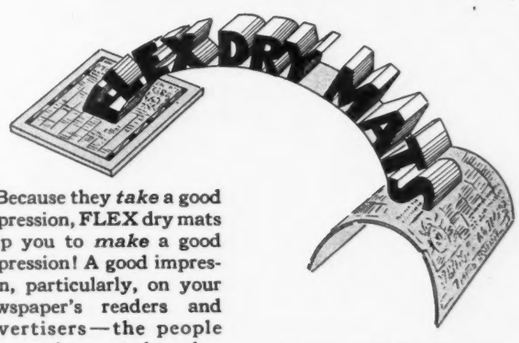
The crime of the nude . . .

They were putting pants on everything . . . the blue noses of 1905. But one of the ideas that came out "from under wraps" at the time was the Kimble idea of a specialized motor for printing equipment. How much of the later growth of enlightenment has depended on just that idea? Your guess is as good as any. But important it has been . . . in promoting printers' profits too. KIMBLE ELECTRIC COMPANY, 2011 W. Hastings Street, Chicago, Illinois

Kimble MOTORS

Distributed by ***AMERICAN TYPE FOUNDERS***
Branches and Sales Agents in Twenty-Five Cities

Your Safest Bridge
from **TYPE to STEREOTYPE**



Because they *take* a good impression, FLEX dry mats help you to *make* a good impression! A good impression, particularly, on your newspaper's readers and advertisers—the people your work *must* please!

We honestly think that the All-American FLEX is the best dry mat made today. And we'll *prove* it—at no cost to you. Write for free samples; and please specify gauge, shrink, and the type of casting equipment you are using.

FLEX
All-American
DRY MATS

FLEXIDEAL
DRY MAT CORPORATION
21 West Street
New York

KILL STATIC PRESS

with a WESTERN STATIC ELIMINATOR

An INEXPENSIVE, Scientific Proven Device, Easy to Attach to All Types of Presses

10 Days Free Trial — No Obligation

Write for Folder

Western Brush Co., Inc., Dept. PE, 31 So. Market St., Chicago, Ill.

MODERN MILLER AUTOMATICS

Two Color • Major
Simplex • High Speed
Master-Speed
Cutter and Creaser

Miller Saw-Trimmers

miller — MILLER PRINTING MACHINERY CO. PITTSBURGH, PA.

FOR DEPENDABLE MAKEREADY PROTECTION

Buy and Specify

CROMWELL

SPECIAL Tympan PREPARED Paper

QUALITY BUILT

THE CROMWELL PAPER CO.

4801-29 S. WHIPPLE STREET . . . . . CHICAGO, ILL.

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912

Makers of Reid Magazine Racks, Etc.

WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

STOP OFFSET

Get your free copy of this new bulletin—"10 Ways to Avoid Offset." Valuable—practical—shows how to save money—improve presswork.

1807 No. Pitcher Street

E. J. KELLY CO

FREE

DUPLEX PRESSES

Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery

The Duplex Printing Press Co.

Battle Creek, Mich.

WALLIN SAW TRIMMER

The ideal Composing Room Tool. Versatile, quick, handy. V track, easily sliding table. Ball-bearing Spindle. V belt drive. Worm gear table lift. 73 em Rapid Swivel gauge. Sure Grip Finger-Tip Lock Work Holder. **$195.00** f. o. b. Omaha. Ball-bearing table $15 extra. Old Miller Saws taken in part payment, $40 allowance.

WALLIN MFG. COMPANY

1122 Harney St. Omaha. Nebr.

SEND YOUR TRIAL ORDER TODAY

IDEAL MOLDING BOARD

SUPERIOR TO STEEL — GAUGES .062" & .085"

COYNE & PADDOCK, INC.

48-15 32nd PLACE LONG ISLAND CITY, N. Y.

SAFETY • RELIABILITY • ECONOMY

CLINE

PRESS DRIVES and CONTROL Reels, Tensions and Pasters . . .

CLINE SYSTEM

CLINE ELEC. MFG. CO.

Chicago: 211 West Wacker Drive
New York: 220 East 42nd Street
San Francisco: 1st Nat'l Bank Bldg.

FREE TRIAL OFFER

Try This New 3-in-1 Blower

in your Press or Composing Room without obligation

Breuer's Ball Bearing **TORNADO** Portable Blower

BLOWS VACUUMS SPRAYS

Cleans Everything

Blows dust and dirt out of Motors and Machinery. Instantly convertible to suction cleaner for type cases, storage bins, walls, floors, etc. Sprays paint and insecticide. Hundreds of uses.

Write for Information

BREUER ELECTRIC MFG. CO.

5114 N. Ravenswood Ave.

CHICAGO, ILL.

ANNUAL EDITORIAL INDEX

JANUARY 1939 TO DECEMBER 1939, INCLUSIVE

A

Accurate Leveling and Aligning Kink, W. F. Schaphorst, 32, Aug.
Advantages in Color Changes, R. A. McNitt, 92, Dec.
Advertising Agency Production Manager Discusses Printing Processes, George Dernley, 12, Feb.
Air Conditioning Index, 155, Dec.
Air Conditioning—Weather, 30, Feb.
Altering Newspaper Press for Narrow Roll Width on Tampa (Fla.) *Daily Times*, Derrill S. Hart, 42, June.
Alves, Clifford, Weather Doesn't Bother, 30, Feb.
ATF Trip Through Factory, H. I. Lewis, 47, Sept.
Anderson, Earl E., Surveys to be Made Annually, 4, April.
Annex, New Orleans *Times-Picayune*, 19, April.
Announces Development of Seven Models of Light Typesetting Machines, 38, Sept.
Anti-Friction Bearings, Manufacture of, 76, June.
Appraisal, One-Man Engraving Plant, Eddie J. Raymond, 94, Dec.
Architects and Engineers Index, 155, Dec.
Associations:
- A.N.P.A.:
  - Executives, Mac Sinclair, 13 July.
  - Mechanical Committee Changes, 60, Dec.
  - Mechanical Conference, 28, May.
  - Mechanical Department Manager, 4, May.
  - Philadelphia Conference Program, 25, June.
  - Word Exhibit, Philadelphia Conference, 28, June.
- Attend Mechanical Conference, 36, April.
- Craftsmen:
  - Craftsmen Convention Report, New York, John E. Cobb, Adam Henri Reiser and J. Homer Winkler, 15, Oct.
  - Research Commission, John E. Cobb, Adam H. Reiser, J. Homer Winkler, 15, Oct.
  - XXth Craftsmen's Convention, 14, August.
- Graphic Arts Exhibition:
  - Fifth Educational Graphic Arts Exhibit, 12, Oct.
  - Fifth Educational Graphic Arts Exposition, 35, Sept.
  - Fifth Educational Graphic Arts Exposition, 16, Nov.
  - Fifth Educational Graphic Arts Word Exhibit, 53, Sept.
  - Getting to the Graphic Arts Exposition, Mac Sinclair, 11, August.
  - Why the Equipment Maker Wants You to Attend the Exposition, 37, Sept.
- Illinois Mechanical Conference:
  - Variety of Technical Topics, Russell B. Miller, 4, Oct.
- Iowa Newspaper Mechanical Conference, 62, June.
- New England Mechanical Conference:
  - Organize New England Conference, 40, July.
  - Six State Conference, 25, August.
  - First Meeting, Andrew P. Palmer, 30, Oct.
- New York State Mechanical Conference, 16, Jan.
- New York State Mechanical Conference, 16, Feb.
- Pennsylvania Mechanical Conference:
  - 150 Attend, 36, April.
- Southern California Mechanical Conference:
  - Cooperation, 54, June.
- S.N.P.A. Eastern Div.:
  - Mechanical Conference Report, 20, Oct.
- S.N.P.A. Western Div.:
  - Conference in Oklahoma City, 17, Jan.
  - Conference Report, 16, March.

Auctioneers Index, 155, Dec.
Automatic Stop, Short Line, Harry G. Pottle, 26, August.
Ayer Newspaper Awards Announced, 35, May.

B

Baffle Mouthpiece, 34, April.
Bag Making Index, 155, Dec.
Ballast Design, 68, Dec.
Ball Bearings, W. R. Hough, 34, March.
Bare, Carlisle G., Rubber Inset Plates, 82, Dec.
Bindery Index, 150, Dec.
Books Index, 155, Dec.
Books:
- Encyclopedia of Lithography, Russell L. Miles, 38, April.
- Fifth Production Yearbook, 45, Feb.
- Knack of Selling Yourself, James T. Mangan, 31, Aug.
- Knox Plan for Printing Control, 45, Feb.
- Litho Media, 22, Oct.
- LSP Yearbook, 34, May.
- Modern Makeready Book, 32, May.
- Modern Typography and Layout, 34, May.
- Photogravure 22, Oct.
- Printing and the Allied Trades, R. Randolph Karch, 32, May.
- Rochester Clinics Report, 46, June.
- Tips on Presswork, 22, Oct.

Box and Carton Index, 155, Dec.
Boy, Pneumatic Tubes, Basket Carrier, Conveyor Belt or Toy Train—Which?, 70, Sept.
Bullard, J. S., Paint, Light, Layout and Drives for Printing Plant Efficiency, 40, June.

C

Capps, H. R., Drilling Block, 62, Dec.
Cebotype Plastic Base Printing Plates, 36, May.
Chase An Economy For the Commercial Shop, 37, June.
Chemistry In High Speed Inks, George Welp, 28, July.
Clinics, To be Held at New York State Conference, 16, Jan,
Clinic Idea, The, (Editorial), 14, Jan.
Clogged Line-Casting Machine Crucible Throat, 32, August.
Clutch Buffer Facing Device, 56, June.
Cobb, John E., Craftsmen Convention Report, 15, Oct.
Composing:
- Announces Development of Seven Models of Light Typesetting Machines, 38, Sept.
- Baffle Mouthpiece, 34, April
- Boy, Pneumatic Tubes, Basket Carrier, Conveyor Belt or Toy Train—Which?, 70, Sept.
- Clogged Line-Casting Machine Crucible Throat, 32, August.
- Clutch Buffer Facing Device, 56, June.
- Composing Room Machinery Upkeep, Ray Schoedler, 6, Dec.
- Costs, Clyde E. Moffitt, 4, August.
- Cut Filing System, 55, June.
- Damage, C. S. Kelley, 58, June.
- Device for Odd-Point Measures, R. J. Richardson, 24, Nov.
- Distributor Box Rail Gauge, 63, June.
- Double Spread Newspaper Plate Matching Problem, Sherman Irish, 8, Sept.
- Drilling Block, H. R. Capps, 62, Dec.
- Emergency Wire, 40, April.
- Facilitating Air Escape From Crucible Throat When Casting Short Measure Slugs, 17, July.
- Gathering Type Metal Samples for Analysis, 63, June.
- Johnson Type Tie-Up, 26, Nov.
- Keyboard Cam Repair Block, 32, Feb.
- Liner-Saver Device Prevents Operator Sending in Lines on Linotype Until He Changes Ejector, 88, June.
- Markup System for Advertising Copy, 4, Jan.
- Matrix Contrast Used With Teletypesetters, 32, Aug.
- Matrix Remover, 60, June.
- Mechanical Dept. Coordination, K. L. Gregg, 64, June.
- No Waste Motion, Mac Sinclair, 46, Sept.
- Odd-Point Measure Device, 62, April.
- Pi Box for Magazine Rack, Herb Lind, 4, Nov.
- Pica and Point Column Measure For Four Point Column Rule, 4, March.
- Pig Rack, Frank L. Gardner, 23, Nov.
- Remedying Troubles on Old Machines, A. H. Pratt, 92, June.
- R. H. Jaw Device, B. T. Juergens, 35, June.
- Semagraph John P. White, 68, June.
- Short Line Automatic Stop, Harry G. Pottle, 26, Aug.
- Simple Gauge for Cutting Base Material, 90, June.
- Slugs for Resisting Stereotype Molding Pressures, 13, Jan.
- Spaceband Sleeve Oxide Inhibitor, 32, March.
- Surveys to be Made Annually, 4, April.
- Tell Tale Indicator, 32, Nov.
- Tell Tale Indicator (Correction), 62, Dec.
- Trucks or Makeup Tables—Which?, Ellis Speer, 78, Sept.
- Two-Letter Display Matrices, Herman Freund, 32, June.
- Uneasy Feeling, Joe Gallagher, 30, May.
- Universal Intertype—How It Works, 21, Nov.

Composing Room Index, 116, Dec.
Composing Room Machinery Upkeep, Ray Schoedler, 6, Dec.
Conference, Mac Sinclair, 16, Feb.
Contact in Offset Plate Making, Adam Henri Reiser, 62, Sept.
Control of Temperature and Humidity, B. Offen, 31, June.
Controlling Colors, 58, June.
Cooperation in the Printing Plant, K. L. Gregg, 54, June.
Correction—Tell Tale Indicator, 62, Dec.
Costs, Composing, Clyde E. Moffitt, 4, August.
Council to Promote Higher Education in Graphic Arts, 15, March.
Craftsmen's N Y. Convention Report, John E. Cobb, Adam H. Reiser, J Homer Winkler, 15, Oct.
Craftsmen's Research Commission, 11, Oct.
Cut Filing System, 55, June.

D

Damage to Second Elevator Bars, C. S. Kelley, 58, June.
Defective Rope Causes Unusual Accident, 23, Nov.
Dennerlein, Peter, Million A Day, 39, Sept.
Dernley, George, Advertising Agency Production Manager Discusses Printing Processes, 13, Feb.
Device for Odd-Point Measures, R. J. Richardson, 24, Nov.
Distributor Box Rail Gauge, 63, June.
Does Our Patent System Need Revision?, 60, Dec.
Double Spread Newspaper Plate Matching Problem, Sherman Irish, 8, Sept.
Drilling Block, H. R. Capps, 62, Dec.
Dryer Signal Device for Saving Electricity, Ralph P. Haan, 25, Aug.

E

Editorial:
- Clinic Idea, The, 14, Jan.
- Craftsmen's Research Commission, 11, Oct.
- Does Our Patent System Need Revision?, 60, Dec.
- Further Newspaper Progress is Dammed, 15, Nov.
- Getting to the Graphic Arts Exposition, Mac Sinclair, 11, August.
- Mechanical Conference Situation, The, 15, Feb.
- "Not Fit to Be Used for Wiping Up the Earth," 50, Dec.
- What Shall I Do With It?, 12, August.
- Why the Equipment Maker Wants You to Attend the Exposition, 37, Sept.

Electrotyping, Plate Making, Index, 122, Dec.
Emergency Wire, G. A. Righter, 40, April.

Engraving:
- Appraisal, One-Man Engraving Plant, Eddie J. Raymond, 94, Dec.
- Halftone Stencil Punch for Zinc Plates, 4, May.
- Human Eye in the Graphic Arts, The, 4, Feb.
- Lighting, 28, Jan.
- Setting Standard for Obtaining Copy Value in Newspaper Engraving, 27, Jan.
- Technical Knowledge Important in Selecting Photos for Engraving, 78, June.
- Process, Lectrocut One-Man, 45, Sept.
- Production, E. D. Jagareski, 72 Sept.
- Zinc Plates, Wm. H. Finkeldey, 49, Dec.

Equipment:
- Adams Reduction Chase, 38, Nov.
- Adjustable Mold Base Plate, 38, June
- Adjustable Second Elevator Transfer Means, 96, Dec.
- All Purpose Stripping Machine, 24, April.
- American-Made Drawing Instruments, 36, Nov.
- Aniline Ink for Pliofilm, 26, May.
- Aqua Sorber Dehumidifier, 21, July.
- Automatic Mouthpiece Wiper, 38, June.
- Automatic Stop for Miehle Vertical Presses, 19, March.
- Auxiliary Friction-Drive Color Fountain, 24, April.
- Bag Inks, New, 24, Feb.
- Cabinet Model Band Saw, 80, Sept.
- Center Control Fork Type Truck, 20, July.
- C & G Sawliner, 20, July.
- Champlain Printing and Fabricating Rotary Letterpress, 20, Aug.
- Circular Knife Grinder, 22, Aug.
- Clark Steel Weld Trucks, 20, July.
- Color Chart, 22, Jan.
- Continuous Suction Stream Feeder, 19, March.
- Counting Equipment and Relay, 87, Sept.
- C. & P. Cylinder Press, 22, Feb.
- Craftsman Offset Table, 76, Sept.
- Craig Dri-Spray to Prevent Offset, 56, Dec.
- Cushman Curved Plate Router, 19, March.
- Delivery Tables and Joggers for Kluge Automatics, 38, June.
- Device Neutralizes Static Electricity, 32, Jan.
- Double Felt Seal Bearing To Single Row Widths, 102 Dec.
- Double Page Plate Matching Machine, 18, March.
- Duex Automatic Spaceband Wiper, 38, June.
- Economy Model Rotary Miterer, 19, May.
- Engrav-O-Graph Produces Halftones, 39, June.
- Extra-Range Display Linotype, 21, July.
- Felt Sample File and Chart, 6, Dec.
- Finer Speed Adjustments, 54, May.
- Finger-Tip Correction Gauge, 44, Nov.
- Fletcher Photo-Engravers' Plate Cooler Press, 19, July.
- Fluorescent Lighting Fixture, 46, Feb.
- Fluorescent Luminaires for Industrial Lighting, 20, Aug.
- Four-Roller Automatic, New, 26, May.
- Fra-Bur Static Burner, 76, Sept.
- Frazier Offset Gun, 23, April.
- Fuller Shell Cast Device, 101, Dec.
- Gathering Equipment, New, 24, Feb.
- Group Bearing Lubrication, 80, Sept.
- Grout Newspaper Counter, 21, July.
- Hammond Mercury TrimOsaw, 80, Sept.
- Hand Cornering Machine, 24, April.
- Heavy Duty Craftsman Press, 102, Dec.
- Holroyd Perforator, The, 32, Jan.
- Honing Pot Crucible Wells, 22, April.
- Hydraulic Paper Roll Lowerer, 66, June.
- Improved Operating Gauges for Paper Drills, 22, April.
- Improved Post Envelope Press, 58, Dec.
- Improved Proof Presses, 19, May.
- Improved Taber Stiffness Gauge, 18, May.
- In-Stock Ink Sample Book, 87, Sept.
- Jack for Printing Plants, 24, Feb.
- Jones Ink Agitator, 50, Dec.
- Kelly Clipper, The, 19, May.
- Kem Lustral Enamel, 18, May.
- Klean-O-Mat Junior Unit, 24, Feb.
- Kut-Lox Cut Mounting Units, 22, July.
- Lees Grippers and Guides, 50, Dec.
- Lever Cutter With Safety Lock, 100, Dec.
- Light, High-Speed Anti-Friction Idler Pulley, 23, April.
- Linotype Developments, 34, Nov.
- Ludlow Indicating Thermostat, 22, Jan.
- Ludlow Shell-Hi Slug Shear, 19, July.

Malloy Metal, 23, Nov.
Magazine Rack, Intertype, 39, June.
Mercury Ebonite Non-Strip Rollers, 46, Nov.
Model Lathes, New, 54, May.
Molding and Vulcanizing Press, 100, Dec.
Motor Base Utilizes Spring Tension, 80, Sept.
Nu-Champion Quoins, 34, Jan.
Offset Blanket Wash, 100, Dec.
Offset Press for Newspapers, 34, Nov.
Ornamental Border Stop, 80, Sept.
Perfect Rule Joints, 106, Dec.
Photo-Electric Counting Equipment, 23, April.
Plate Making Camera Lamp, 66, June.
Poster Tints, New, 19, July.
Power Gauge for Paper Cutters, 34, Jan.
Precision Variable Speed Drives, 32, Jan.
Pres-To Oiler, 19, May.
Printed-Paper Handling Trucks, 106, Dec.
Reeves Hydraulic Automatic Control, 56, May.
Register Cuts Waste in Litho Color Press, 22, Aug.
Registering Device for Newspaper Color Plate, 46, Oct.
Register Zinc and Redback, 56, Dec.
Riehl Galley Locks, 19, July.
Rotary Presses for Wrapping Papers, 68, Dec.
Routomatic Curved Plate Router, 22, July.
Rubber or Metal Plates May be Used on New Press, 22, Aug.
Rubber Plate Machine, 20, July.
Rubber Printing Plate Progress, 56, Dec.
Safety Carboy Pourer, 50, Aug.
Service Pressroom Dolly, 18, March.
Sheet Register Gauges, 47, Oct.
SKF Rubberflex Pillow Block, 22, Jan.
Slitter and Rewinder, 106, Dec.
Slotted Eye Mold, 39, June.
Small Resistors for Severe Service, 44, Nov.
Sofnas Automatic Mouthpiece Wiper, 58, Dec.
Stacker Operating Control, 18, May.
Stainless Metal Printers' Rule, 18, May.
Steamaire Humidity Units, 22, Jan.
Steel Grip Catches, 18, March.
Stereotex Hydraulic Matrix Press, 26, May.
Streamlined Heli-O-Lite Camera Lamp, 38, June.
Streamlined Vulcanizer, 18, May.
Style MF Paper Drilling Machine, 22, Feb.
Suspended Platform Scale, 23, April.
Time Totalizers, 22, April.
Three-Light and 48 in. Fluorescent Daylight Reflector Units, 24, April.
Transparent Impressions, 22, Feb.
Triplemetal for Photo-Engraving, 18, March.
Tubular Plate Matching Unit, 22, July.
Two Colors on Both Sides by Offset Web Press, 24, Feb.
Twin Lamp Flurescent Fixture, 56, Dec.
Vandercook Transparent Impressions for Plate Making, 26, May.
Water-Cooled Pig Mold, 46, Nov.
Waverly Galley Lockup, 42, April.
Wonderlite Color-Matching Bulb, 26, May.
Ever Earn $30,000 in One Day for Your Printing Plant?, W. F. Schaphorst, 8, Sept.
Executives Philadelphia A.N.P.A. Conference Report, Mac Sinclair, 13, July.
Espouses Two-Hand Cutter Starting Device, 48, Jan.

F

Facilitating Air Escape From Crucible Throat When Casting Short Measure Slugs, 17, July.
Features of New Kelly Ink Plant, 50, May.
Fifth Educational Graphic Arts Exhibit, 12, Oct.
Fifth Graphic Arts Exposition, 16, Nov.
Fifth Education Graphic Arts Exposition, 35, Sept.
Finkeldey, William H., Zinc Plates, 49, Dec.
First Meeting, Andrew P. Palmer, 30, Oct.
Foreman, Status of the, 30, July.
Freund, Herman, Two-Letter Display Matrices, 32, June.
Friday, M. L., Simplifying Metal Problems, 36, June.
Further Newspaper Progress is Dammed, 15, Nov.

G

Gallagher, Joe, Uneasy Feeling when Machine Parts Are Not on Hand, 30, May.
Gardner, Frank L., Pig Rack, 23, Nov.
Gardner, I. J., Now 75, Will Retire Soon, 4, July.
Gathering Type Metal Samples for Analysis, 63, June.
General-Purpose Oil Window, 58, Dec.
Getting Off On the Right Foot, 106, Sept
Getting to the Graphic Arts Exposition, Mac Sinclair, 11, August.
Ghost and Streaks, 95, June.
Giegengack, Hon. A. E., Research, 70, Dec.
Glare is Objectionable in Printing Plant, Walter B. Lancaster, 80, June.
Glass House, Ottawa (Ill.) Daily Republican Times, 16, August.
Gold Ink, Some Precautions in Printing With, 102, Sept.
Gravure:
  Advertising Agency Production Manager Discusses, 13, Feb.
  Control of Temperature and Humidity, B. Offen, 31, June.
  Identification of Printed Matter, 66, Sept.
  Million A Day, Peter Dennerlein, 39, Sept.
  Opinions About Letterpress, Offset, Gravure, Kent Rhodes, Edward Schultz, George Dernley, 13, Feb.
Gregg, K. L., Cooperation in the Printing Plant, 54, June. Mechanical Dept. Coordination, 64, June.
Graphic Arts Word Exhibit, 53, Sept.
Gravure, Plate Making, Index, 123, Dec.

H

Haan, Ralph P., Dryer Signal Device for Saving Electricity, 25, Aug.
Hacker, Fred A., Offset-Combination Rubber Relief Printing, 30, Nov.
Halftone 68½ Line Screen, 4, Nov.
Halftone Stencil Punch for Zinc Plates, 4, May.
Hamblen, Charles G., Servicer Box, 30, May.
Hard Packing in Newspaper Printing, Frank Milne, 50, Sept.
Harrold, C. W., Metallurgical Progress, 92, Sept.
Hart, Derrill S., Altering Newspaper Press for Narrow Roll Width on Tampa (Fla.) *Daily Times*, 42, June.
Henderson, William T., Slugs for Resisting Stereotype Molding Pressures, 13, Jan.
Houck, L. H., "Windy Bill" Rides Again, 100, Sept.
Hough, W. R., Ball Bearings, 34, March.
Human Eye in the Graphic Arts, Adam Henri Reiser, 4, Feb.

I

Identification of Printed Matter, 66, Sept.
Improve Newspaper Printing, S.N.P.A. Western Div. Conference Report, 16, March.
Indexes:
  Manufacturers', Dealers' and Suppliers' Index, 115, Dec.
  Composing Room, 116, Dec.
  Plate Making:
    Electrotyping, 122, Dec.
    Gravure, 123, Dec.
    Miscellaneous, 126, Dec.
    Offset-Lith, 126, Dec.
    Photo-engraving, 130, Dec.
    Rubber, 134, Dec.
    Stereotyping, 134, Dec.
    Synthetic, 138, Dec.
  Paper and Printing Stock, 139, Dec.
  Paper Cutting and Processing, 140, Dec.
  Pressroom, 142, Dec.
  Bindery, 150, Dec.
  Mailing and Shipping, 154, Dec.
  Miscellaneous:
    Air Conditioning, 155, Dec.
    Architects and Engineers, 155, Dec.
    Bag Making, 155, Dec.
    Box and Carton, 155, Dec.
    Macerating Machines, 155, Dec.
    Machinery Dealers, 155, Dec.
    Paraffining, Varnishing and Waxing, 156, Dec.
    Production Methods, 156, Dec.
    Silk Screen, 156, Dec.
    Time Clocks, Recorder, 156, Dec.
    Vibration Eliminating, 156, Dec.
    Waste Paper Balers, 156, Dec.
    Books, 155, Dec.
    Auctioneers, 155, Dec.
    Power Generating Equipment, 156, Dec.
  Trade Name Index, 157, Dec.
  Paper Trade Name Index, 168, Dec.
Ink:
  Chemistry, George Welp, 28, July.
  Features of New Kelly Ink Plant, 50, May.
  Little Encyclopedia for Ink Problems, 13, August.
  Perfumed Ink, F. L. Yeager, 4, Nov.
  Some Precautions for Printing Gold Ink.
Instantaneous Ratio Computer For Printing Plant Problems, W. F. Schaphorst, 75, June.
Intertype, Universal—How It Works, 21, Nov.
Iowa Mechanical Conference, 62, June.
Irish, Sherman, Double Spread Newspaper Plate Matching Problem, 8, Sept.

J

Jagareski, E. D., Engraving Production, 72, Sept.
Johnson Type Tie-Up, 26, Nov.
Journey Through New Plant of Federated Metals, 34, June.
Juergens, B. T., R. H. Jaw Device, 35, June.

K

Kelley, C. S., Damage to Second Elevator Bars, 58, June.
Keyboard Cam Repair Block, 32, Feb.

L

Lacure, Earl P., Operating Problems, 91, June.
Lancaster, Walter B., Glare is Objectionable in Printing Plant, 80, June.
Lectrocut One-Man Engraving Process, 45, Sept.
Letterpress, Offset, Gravure, Opinions About, Kent Rhodes, Edward Schultz, George Dernley, 13, Feb.
Letter P Offgrav., See under Paper.
Letters To the Editor, Wood Block Mounting Substitutes, 22, Nov.
  Concerning Early Dry Mat Importations, 68, Dec.
  Mr. Roesen Confirms, 68, Dec.
Lewis, H. I., ATF, Trip Through Factory, 47, Sept.
Lighting, 28, Jan.
Light Typesetting Machines, Announces Development of Seven Models, 38, Sept.
Lind, Herb, Pi Box for Magazine Rack, 4, Nov.
Liner-Saver Device Prevents Operator Sending in Lines on Linotype Until He Changes Ejector, 88, June.
Little Encyclopedia for Ink Problems, 13, August.

M

Macerating Machines Index, 155, Dec.
Machinery Dealers Index, 155, Dec.
Magazine Production Manager Discusses, Kent Rhodes, 13, Feb.
Magic in Printing with Gold Ink?, 17, April.
Mailing and Shipping Index, 154, Dec.
Manufacture of Anti-Friction Bearings, 76, June.
Markup System for Advertising Copy, 4, Jan.
Matrix Contrast Used With Teletypesetters, 32, August.
Matrix Remover, 60, June.
McNitt, R. A., Advantages in Color Changes, 92, Dec.
Mechanical Conference, 28, May.
Mechanical Conference Situation, 15, Feb.
Mechanical Department Manager Reports, (A.N.P.A.), 4, May.
Mechanical Department Coordination, K. L. Gregg, 64, June.
Merish, Fred, Motor Modernization Put on Your Program, 66, Dec.
  Survey, 15, May.
  Survey, 48, June.
Metallurgical Progress, C. W. Harrold, 92, Sept.
Miller, Russell B., Variety of Technical Topics, 4, Oct.
Million A Day, Peter Dennerlein, 39, Sept.
Milne, Frank, Hard Packing, 50, Sept.
Miscellaneous Plate Making Index, 126, Dec.
Modern Home, Mt. Vernon, (O.) *News*, 52, June.
Moffitt, Clyde E., Costs, 4, August.
Motor Modernization Put on Your Program, Fred Merish, 66, Dec.
Much to Learn Yet About Value of Color in Printing, W. F. Schaphorst, 35, Jan.

N

New Plants:
  Annex, New Orleans *Times-Picayune* and *States*, 19, April.
  Glass House, Ottawa (Ill.) *Daily Republican Times*, 16, August
  Journey Through Federated Metal Div. Am. Smelting & Refining Co., 34, June.
  Modern Home, Mt. Vernon (O.) *News*, 52, June.
Not Always What It Seems, William J. Schneider, 30, Nov.
Novel Feature of the SNPA Western Division Mechanical Conference, 17, Jan.
"Not Fit to Be Used for Wiping Up the Earth," 50, Dec.
No Waste Motion, Mac Sinclair, 46, Sept.

O

Odd-Point Measure Device, 62, April.
Offen, B., Control of Temperature and Humidity, 31, June.
Offgrav, Letter P., Paper Problems:
  Am I All Wet?, 26, July.
  Bond Paper Behavior, 24, May.
  Helping the Paper Maker, 82, Sept.
  No Perfect Standard Paper, 18, April.
  Paper for Printing Aluminum Inks, Varnishing Label Papers, 46, June.
  Paper Technical Information, 18, August.
  Standardization, 26, Feb.
Offset-Lith:
  Contact, Adam Henri Reiser, 62, Sept.
  Human Eye in the Graphic Arts, The, 4, Feb.
  Identification of Printed Matter, 66, Sept.
  Metallurgical Progress, C. W. Harrold, 92, Sept.
  Offset, Adam Henri Reiser, 11, July.
  Offset-Combination Rubber Relief Printing, Fred A. Hacker, 30, Nov.
  Offset Printed Daily, 106, Dec.
  Opinions About Letterpress, Offset, Gravure, Kent Rhodes, Edward Schultz, George Dernley, 13, Feb.
  Photographic Images Sans Camera, 18, Oct.
  Purchasing Agent Discusses, 13, Feb.
  Skin Ailments and Bichromate, I, Adam Henri Reiser, 28, Nov.
  Skin Ailments and Bichromate, II, Adam Henri Reiser, 54, Dec.
  What Is It?—X, 28, April.
  Who Is It?, Adam Henri Reiser, 17, May.
Offset-Lith. Plate Making Index, 126, Dec.
Oiling, Mills N. Ripley, 48, Dec.
One-Man Engraving Process, Lectrocut, 45, Sept.
Operating Problems of Small Dailies, Earl P. Lacure, 91, June.
Opinions About Letterpress, Offset, Gravure, Kent Rhodes, Edward Schultz, George Dernley, 13, Feb.
Organize Conference, 40, July.

P

Paint, Light, Layout and Drives For Printing Plant Efficiency, J. S. Bullard, 40, June.
Palmer, Andrew P., First Meeting, New Eng. Mech. Conf., 30, Oct.
Paper:
  Am I All Wet?, Letter P. Offgrav, 26, July.
  Bond Paper Behavior, Letter P. Offgrav, 24, May.
  Helping the Paper Maker, Letter P. Offgrav, 82, Sept.
  No Perfect Standard Paper, 18, April.
  Paper for Printing Aluminum Inks, Varnishing Label Papers, Letter P. Offgrav, 46, June.

Paper Technical Information, Letter P. Offgrav, 18, Aug.
Standardization, 26, Feb.
Paper and Printing Stock Index, 139, Dec.
Paper Cutting and Processing Index, 140, Dec.
Paper Trade Name Index, 168, Dec.
Paraffining, Varnishing and Waxing Index, 156, Dec.
Patents: 40, Jan.; 40, Feb.; 40, March; 50, April; 38, May; 80, June; 42, July; 40, August; 89, Sept.; 35, Oct.; 41, Nov.; 85 Dec.
Perfumed Ink, F. L. Yeager, 4, Nov.
Photo-engraving Plate Making Index, 130, Dec
Photographic Images Sans Camera, 18, Oct.
Pi Box for Magazine Rack, Herb Lind, 4, Nov.
Pica and Point Column Measure For Four Point Column Rule, 4, March.
Pictures in Newspapers, Mac Sinclair, 46, Dec.
Pig Rack, Frank L. Gardner, 23, Nov.
Planning the Printing Plant, I, James William Thomas, 20, Jan.
Planning the Printing Plant, II, James William Thomas, 20, Feb.
Planning the Printing Plant, III, James William Thomas, 26, April.
Plastic Base Printing Plates, Cebotype, 36, May.
Pottle, Harry G., Short Line Automatic Stop, 26, August.
Power Generating Equipment Index, 156, Dec.
Pratt, A. H., Remedying Troubles on Old Machines, 92, June.
Pre-Makeready Business, This, 15, Jan.
Pre-Makeready Business, This, 20, March.
Pressroom:
Advantages in Color Changes, R. A. McNitt, 92, Dec.
Appraisal, Eddie J. Raymond, 94, Dec.
Altering Newspaper Press for Narrow Roll Width on Tampa (Fla.) *Daily Times*, Derrill S. Hart, 42, June.
Combating Static Electricity, 56, June.
Controlling Colors, 58, June.
Ghosts and Streaks, 95, June.
Hard Packing, Frank Milne, 50, Sept.
Lighting, 28, Jan.
Little Encyclopedia for Ink Problems, 13, August.
Magazine Production Manager Discusses, Kent Rhodes, 13, Feb.
Magic, 17, April.
Metallurgical Progress, C. W. Harrold, 92, Sept.
Million A Day, Peter Dennerlein, 39, Sept.
Much to Learn Yet About Value of Color in Printing, 35, Jan.
Not Always What It Seems, William J. Schneider, 30, Nov.
Oiling, Mills N. Ripley, 48, Dec.
Operating Problems, Earl P. Lacure, 91, June.
Pictures in Newspapers, Mac Sinclair, 46, Dec.
Pre-Makeready Business, 15, Jan.
Pre-Makeready Business, 20, March.
Roller-Setting Gauge, Auburn Taylor, 34, May.
Rubber Inset Plates, Carlisle G. Bare, 82, Dec.
Some Precautions in Printing With Gold Ink, 102, Sept.
Spark Plug Tester Becomes Static Detector, 50, July.
Survey, 15, May.
Watch Your Obsolescence, Frederick G. Rudge, 45, Dec.
Zinc Plates, William H. Finkeldey, 49, Dec.
Pressroom Index, 142, Dec.
Printed Matter, Identification of, 66, Sept.
Process, Lectrocut One-Man Engraving, 45, Sept.
Production, Engraving, E. D. Jagareski, 72, Sept.
Production Methods:
Costs, Clyde E. Moffitt, 4, August.
Engraving Production, E. D. Jagareski, 72, Sept.
Getting Off On The Right Foot, 106, Sept.
Instantaneous Ratio Computer For Printing Plant Problems, W. F. Schaphorst, 75, June.
Paint, Light, Layout and Drives For Printing Plant Efficiency, J. S. Bullard, 40, June.
Planning the Printing Plant, I, 20, Jan.
Planning the Printing Plant, II, 20, Feb.
Planning the Printing Plant, III, 26, April.
Standard Pipes Make Safe Columns or Struts in the Printing Plant, 74, June.
Status of the Foreman, 30, July.
Survey, Fred Merish, 15, May.
Survey, Fred Merish, 48, June.
Surveys to be Made Annually, 4, April.
System In Production Via the Shortest Distance Between Two Points, 27, May.
Production Methods Index, 156, Dec.
Publication Chase An Economy for the Commercial Shop, 37, June.
Public Printer's Report, 36, Feb.
Purchasing Agent Discusses, Edward Schultz, 13, Feb.
Put Motor Modernization on Your Program, Fred Merish, 66, Dec.

R

Raymond, Eddie J., Appraisal, 94, Dec.
Register In Stereotype Plate Making, Vern Williams, 28, Feb.
Reiser, Adam Henri:
Contact In Offset Plate Making, 62, Sept.
Craftsmen Convention Report, 15, Oct.
Human Eye in the Graphic Arts, The, 4, Feb
Offset, 11, July.
Skin Ailments and Bichromate, I, 28, Nov.; II, 54, Dec.
What Is It?—X, 28, April.
Who Is It?, 17, May
Remedying Troubles on Old Machines, A. H. Pratt, 92, June.
Research, Hon. A. E. Giegengack, 70, Dec.
Research Commission, Craftsmen's, 11, Oct.
R. H Jaw Device, B. T. Juergens, 35, June.
Rhodes, Kent, Magazine Production Manager, Discusses, 13, Feb.
Richardson, R. J., Device for Odd-Point Measures, 24, Nov.
Righter, G. A., Emergency Wire, 40, April.
Ripley, Mills N. Oiling, 48, Dec.
Roller-Setting Gauge, Auburn Taylor, 34, May.
Rubber Inset Plates, Carlisle G. Bare, 82, Dec.
Rubber Plate Making Index, 134, Dec.
Rudge, Frederick G., Watch Your Obsolescence, 45, Dec.

S

Schaphorst, W. F.:
Accurate Leveling and Aligning Kink, 32, August.
Ever Earn $30,000 In One Day for Your Printing Plant?, 8, Sept.
Instantaneous Ratio Computer For Printing Plant Problems, 75, June.
Much to Learn Yet About Value of Color in Printing, 35, Jan.
Standard Pipes Make Safe Columns or Struts in the Printing Plant, 74, June.
Use This Printing Expert, 62, Sept.
Schneider, William J. Not Always What It Seems, 30, Nov.
Schoedler, Ray, Composing Room Machinery Upkeep, 6, Dec.
Schultz, Edward, Opinions About Letterpress, Offset, Gravure, Kent Rhodes, George Dernley, 13, Feb.
Semagraph, John P. White, 68, June.
Servicer Box, Charles G. Hamblen, 30, May.
Setting Standard for Obtaining Copy Value in Newspaper Engraving, 27, Jan.
Short Line Automatic Stop, Harry G. Pottle, 26, August.
Silk Screen Index, 156, Dec.
Simple Gauge for Cutting Base Material, 90, June.
Simplifying Metal Problems, M. L. Friday, 36, June.
Sinclair, Mac:
Conference, (New York State Mechanical), 16, Feb.
Executives, (Philadelphia A.N.P.A., The Chemical Conference), 13, July.
Getting to the Graphic Arts Exposition, 11, August.
No Waste Motion in Memphis (Tenn.) *Commercial Office* Composing Room, 46, Sept.
Pictures in Newspapers, 46, Dec.
Six State New England Conference, 25, August.
Skin Ailments and Bichromate, I, Adam Henri Reiser, 28, Nov.
Skin Ailments and Bichromate, II, Adam Henri Reiser, 54, Dec.
Slugs for Resisting Stereotype Molding Pressures, W. T. Henderson, 13, Jan.
Some Precautions In Printing With Gold Ink, 102, Sept.
SNPA Mechanical Conference, 20, Oct.
Spaceband Sleeve Oxide Inhibitor, 32, March.
Spark Plug Tester Becomes Static Detector, 50, July.
Speer, Ellis, Trucks or Makeup Tables—Which?, 78, Sept.
Standard Pipes Make Safe Columns or Struts in the Printing Plant, W. F. Schaphorst, 74, June.
Status of the Foreman, 30, July.
Stereotype:
Advantages in Color Changes, R. A. McNitt, 92, Dec.
Concerning Early Dry Mat Importations, 68, Dec.
Defective Rope Causes An Unusual Accident, 23, Nov.
Double Spread Newspaper Plate Matching Problem, Sherman Irish, 8, Sept.
Dryer Signal Device for Saving Electricity, Ralph P. Haan, 25, August.
Hard Packing, Frank Milne, 50, Sept.
Mr. Roesen Confirms, 68, Dec.
Pictures In Newspapers, 46, Dec.
Register in Stereotype Plates, Vern Williams, 28, Feb.
Rubber Inset Plates, Carlisle G. Bare, 82, Dec.
Servicer Box, Charles G. Hamblen, 30 May.
Stereotype Plate Making Index, 134, Dec.
Survey of Materials Handling Equipment, Fred Merish, 15, May.
Survey of Electrical Systems, Fred Merish, 48, June.
Surveys to be Made Annually, Earl E. Anderson, 4, April.
Synthetic Plate Making Index, 138 Dec.
System In Production Via the Shortest Distance Between Two Points, 27, May

T

Taylor, Auburn, Roller-Setting Gauge, 34, May.
Technical Knowledge Important in Selecting Photos for Engraving, 78, June.
Tell Tale Indicator, 32, Nov.
Tell Tale Indicator (Correction), 62, Dec
Thomas, James William:
Planning the Printing Plant, I, 20, Jan.
Planning the Printing Plant, II, 20, Feb.
Planning the Printing Plant, III, 26, April.
Time Clocks, Recorders, Index, 156, Dec.
Trade Name Index, 157, Dec.
Trayser Elected To ATF Board, 15, August.
Trucks or Makeup Tables—Which?, Ellis Speer, 78, Sept.
XXth Craftsmen's Convention, 14, August
Two-Letter Display Matrices, Herman Freund, 32, June.
Type Metal Samples for Analysis, 63, June.
Typesetting Machines, Announces Development of Seven Models, Light, 38, Sept.

U

Uneasy Feeling, When Machine Parts Are Not On Hand, Joe Gallagher, 30, May.
Universal Intertype—How It Works, 21, Nov.
Use This Printing Expert, W. F Schaphorst, 62, Sept.

V

Variety of Technical Topics, Russell B. Miller, 4, Oct.
Vibration Eliminating Index, 156, Dec.

W

Waste Paper Balers Index, 156, Dec.
Watch Your Obsolescence, Frederick G. Rudge, 45, Dec.
Weather, Clifford Alves, 30, Feb.
Welp, George, Chemistry of Inks, 28, July.
What Is It?—X, Adam Henri Reiser, 28, April.
White, John P., Semagraph, 68, June.
Who Is It?, Adam Henri Reiser, 17, May.
Why the Equipment Maker Wants You to Attend the Exposition, 37, Sept.
Williams, Vern, Register in Stereotype Plate Making, 28, Feb.
Winkler, J. Homer, Craftsmen Convention Report, 15, Oct.
"Windy Bill" Rides Again, L. H. Houck, 100, Sept.
Word Exhibit for A.N.P.A. Conference, 28, June.

Y

Yeager, F. L., Perfumed Ink in Newspaper Advertisement, 4, Nov

Z

Zinc Plates, William H Finkeldey, 49, Dec.

EQUIPMENT SALES

Kluge Installations

12x18 Kluge Automatic Presses — H. M. Smyth Printing Co., St. Paul, Minn.; Jeanerette (La.) *Press;* Thief River Falls (Minn.) *Times;* Lubbock County (Tex.) *Herald;* Chandlers, Inc., Evanston, Ill.; Capitol Hill Prtg. Co., Denver; Franklin Press, Chicago; Jacksonville (Fla.) *Herald;* Hedstrom-Barry Co., Inc., Chicago; Decatur (Ala.) Printing Co.; Michigan City Press, Inc., Chicago; Springfield (Tenn.) *Herald News;* The Commercial Press, Chicago; Linotype Printing Co., Memphis, Tenn.; Eagle Press, Chicago; Ware Shoals (So. Car.) Mfg. Co.; George M. Wilson, Grovertown, Ind.; James Williams Prtg. Co., Yadkinville, No. Car.; Boyten Miller Press, Detroit; Clarkston (Wash.) *Herald;* Litchfield (Ill.) Prtg. & Staty. Co.; General Manifold & Prtg. Co., Franklin, Pa.; Leff Printing Company, Woodridge, N. Y.; Penneo Sales Company, Williamsport, Pa.; F & J Printing Company, Syracuse, N. Y.; West Printing Co., Baltimore, Md.; The Hamilton (N. Y.) *Republican;* The Lindley Press, Philadelphia, Pa.; The Alta Printing Co., Lake Charles, La.; The Graphic Press, Camden, N. J.; Dixie Prtg. & Supply Co., Inc., New Orleans, La.; Standard Paper Box Corp., Los Angeles, Calif.; The Shaw Press, Pasadena, Cal.; Deschamps Bros., Salem, Mass., and Congregation of the Holy Family, Richmond Heights, Mo.

12x18 Kluge Feeders — Frye Printing Company, Springfield, Ill.; Liberty (N. Y.) Gazette Co.; Service Print Shop, Lexington, Ky., and Wyckoff Press, Brooklyn, N. Y.

12x18 Kluge Combination Die-Cutting & Printing Presses — A. P. Press, Jamaica, N.Y., and Wyckoff Press, Brooklyn, N. Y.

Kluge Die-Cutting Press — Mundet Cork Corp., Brooklyn, N. Y.

10x15 Kluge Automatic Presses — The Boss Mfg. Co., Kewanee, Ill.; Mayfield (Ky.) Printing Co.; John MacFarlan, Detroit, Mich.; The Shipmark Co., Worcester, Mass.; Union Central Life Ins. Co., Cincinnati, O., and The Empire Press, Stamford, Conn.

10x15 Kluge Feeders — Fritz Printing Company, Lexington, Ky.

4-Roller Kluge Automatic Presses — Elmira (N. Y.) Reformatory; The Darby Press, Eagle Rock, Calif.; Advertiser Publ. Co., Pascagoula, Miss.; Adam Barth, New York, N. Y.; National Printing Co., San Jose, Calif., Piedmont Label Co., Bedford, Va., and Ralston Purina Co.; St. Louis, Mo., (with long jogger).

Open Kluge Presses — Beatrice Printing Co., Beatrice, Neb.

Linotype Installations

One or more Linotypes, many of them with self-quadders, have been installed by the Riverside (Calif.) *Daily Press* and the *Enterprise;* V. Dell Butler, Sandy, Ore.; Detroit *Tribune;* Marion (Ind.) *News-Herald;* Austin (Texas) *American and the Statesman;* Hoschton (Ga.) *News;* Ohio State University, Columbus; W. S. Welsh Printing Company, Inc., Lexington, Ky.; Biddeford (Maine) *Daisy Journal;* Kinston (N. C.) *Daily Free Press;* American Bank Note Company, Chicago; Greenfield Printing and Publishing Company, Greenfield; Cherokee (Okla.) *Messenger* and the *Republican;* Chester (Pa.) *Times;* Iron River (Mich.) *Reporter;* Gregory (S. D.) *Times-Advocate;* Northern News, Kirkland Lake, Ont.; Niagara Falls (N. Y.) *Gazette;* Pulaski (Va.) *News-Worker;* Opelousas (La.) *Daily World;* Buffalo (N. Y.) *Evening News;* Byron S. Adams, Washington, D. C.; Crescent Print Shop, New Orleans; Dubuque (Ia.) *Telegraph-Herald;* Monahans (Tex.) *Ezpress-Reporter;* Otterbein Press, Dayton, O.; Rupel Typesetting Service, South Bend, Ind.; *Oak Parker,* Oak Park, Ill.; *Jackson County Journal,* Sylva, N. C.; *County Press* and the *Town-Crier,* Lakeville, Mass.; Portsmouth (O.) *Times;* Pennland Printing Company, Philadelphia, Pa.; Royal Oak (Mich.) *Daily Tribune;* Monahans (Tex.) *News;* Lee Gordon Simmons, New Orleans; *Daily Shipping Guide,* New Orleans; Birmingham (Ala.) *News* and the *Age-Herald;* Torrington (Conn.) *Register;* Bloomington (Ill.) *Daily Pantagraph;* Hale-Haas Corporation, Eau Claire, Wis.; Eau Claire (Wis.) *Leader* and the *Daily Telegram;* Lynn (Mass.) *Telegram-News;* Plimpton Press, Norwood, Mass.; Moscow (Idaho) *News-Review* and the *Star-Mirror,* Padberg Linotyping Company, Detroit; Francis J. Murray, Rector, Ark.; George Walter Nave, Washington, D. C.; Russian *News,* San Francisco; Hartford (Conn.) *Courant;* Columbus (Ga.) *Ledger* and the *Enquirer;* Superior (Wis.) *Telegram;* Delaware County *Advocate,* Chester, Pa.; U. S. Marine Corps, Philadelphia, Pa.; Hamilton Printing Company, Chicago; Texarkana (Tex.) *Gazette;* Mitchell (S. D.) *Daily Republic;* Idaho *Examiner* and the *Pocatello Shopper,* Pocatello, Idaho; Diamant Typographic Service, New York City; Peoria Typesetting Company, Peoria, Ill.; Elmo (Mo.) *Register;* Armstrong Printing Company, Greenville, Miss.; Sioux Falls (S. D.) *Argus-Leader.*

Hunt it up in the convenient P-Double-E Equipment and Supplies Index.

Spartan Heavy

The Mergenthaler Linotype Company announces the completion of the 18-pt. size of Spartan Heavy with Italic.

"This series in the Spartan family," says C. H. Griffith, Mergenthaler vice-president in charge of typographic development, "is now available in the 8-, 10-, 12-, 14- and 18-point sizes. We also have in process of manufacture the Spartan Medium with Heavy series in a complete range of sizes from 6 to 24 point."

MODERN man cannot be served by a MODERN man cannot be served by a

Hold Annual Meeting

Between the holidays, Rapid Roller Company, Chicago, held its annual sales conference under the direction of Salesmanager B. P. Nilles. All Rapid representatives attending feel that the prospects for the Graphic Arts Industry during 1940 should be unusually good.

"Sales gains are shown in each territory and prospects for further increases are apparent" says Mr. Nilles.

January Advertiser's Index

American Publishers Supply.....30, 43

American Type Founders.....6, 42
Agency: G. M. Basford Company, New York, N. Y.

Atlantic Zinc Works..... 31

Booth, E. A., Rubber Company..... 37

Breuer Electric Manufacturing Company..... 44
Agency: Carl I. Henrikson, Advertising, Chicago, Ill.

Burgess Cellulose Company..... 33
Agency: Almon Brooks Wilder, Advertising, Chicago, Ill.

Certified Dry Mat Corporation..... 37
Agency: The H. P. Boynton Advertising Agency, Cleveland, Ohio.

Challenge Machinery Company, The..... 4
Agency: Simmonds & Simmonds, Inc., Chicago, Ill.

Champion Paper & Fibre Company, The..... 29

Cline Electric Manufacturing Company..... 44
Agency: Almon Brooks Wilder, Advertising, Chicago, Ill.

Coyne & Paddock, Inc...... 44

Cromwell Paper Company, The..... 44
Agency: Roche, Williams & Cunnyngham, Inc., Chicago, Ill.

Dayton Rubber Manufacturing Company, The 27
Agency: Geyer-Cornell & Newell, Inc., Dayton, Ohio.

Duplex Printing Press Company, The..... 44

Eastern Newspaper Supply..... 40

Flexideal Dry Mat Company..... 43
Agency: Fred Glen Small, New York, N. Y.

Hammond Machinery Builders, Inc......33, 35

Harris-Seybold-Potter Company..... 8
Agency: Baker and Baker & Associates, Inc., Cleveland, Ohio.

Huber, J. M., Inc......16A, B, C, D
Agency: Bermingham, Castleman & Pierce, New York, N. Y.

Imperial Type Metal Company..... 35

International Newspaper Supply Company... 41

International Printing Ink Corporation..... 39
Agency: T. J. Maloney, Inc., New York, N. Y.

Intertype Corporation.....**Outside Back Cover**
Agency: Fred Glen Small, New York, N. Y.

Kelly, E. J., Company..... 44
Agency: Almon Brooks Wilder, Advertising, Chicago, Ill.

Kimble Electric Company..... 43
Agency: Kirkgasser-Drew, Inc., Chicago, Ill.

Klean-O-Mat Corporation..... 41

Lanston Monotype Machine Company..... 10

Linotype Parts Company..... 34

Ludlow Typograph Company..... 3

Mergenthaler Linotype Co...Inside Front Cover
Agency: Kenyon & Eckhardt, Inc., New York, N. Y.

Miller Printing Machinery Company..... 44
Agency: Ketchum, MacLeod & Grove, Inc., Pittsburgh, Pa.

Montgomery & Bacon..... 30

New Era Manufacturing Company..... 38

North American Press..... 38

Rapid Roller Company..... 36
Agency: Burton G. Feldman & Associates, Chicago, Ill.

Reid, William, & Company..... 44

Rivett Lathe & Grinder, Inc...... 41

Rouse, H. B., & Company..... 23
Agency: Clifton Kirkpatrick, Chicago, Ill.

Russell Products Company..... 38

Sinclair & Valentine Company..... 40

SKF Industries, Inc...... 25

Sta-Hi Corporation..... 1

Seybold Machine Company—(Div. Harris-Seybold-Potter Company)..... 9
Agency: G. M. Basford Company, Cleveland, Ohio.

Timken Roller Bearing Company, The..... 7

Tingue, Brown & Company..... 43
Agency: The Overhague Advertising Agency, New York, N. Y.

Vandercook & Sons.....**Inside Back Cover**
Agency: Clifton Kirkpatrick, Chicago, Ill.

Wallin Mfg. Company..... 44

Western Brush Company, Inc...... 44
Agency: Kuttner & Kuttner Advertising Agency, Chicago, Ill.

Wetter Numbering Machine Company..... 41
Agency: O. S. Tyson & Co., Inc., New York, N. Y.

Wood Flong Corporation..... 39
Agency: Kaye-St. George, Advertising, New York, N. Y.

free Technical Information and Literature for *you*

Circle the numbers on the convenient postage-paid return card, supply your name, title and company address and mail — we do the rest. Manufacturer or supplier will send you information or literature about equipment or supplies advertised in this issue. This card saves you time and postage — Keep informed — No obligation.

Pressroom

1 COLD SET INK — See the Huber insert in this issue, then circle this number on the card below for free specimen and additional information on this new ink development.

2 PRINTING PRESS BLANKETS —Tingue, Brown & Company enumerate the various kinds of press blankets supplied by them. Samples and prices upon request.

3 NUMBERING MACHINES — for flat bed and rotary presses are manufactured by the Wetter Numbering Machine Company. Full information offered.

4 PRESS—American Type Founders states, "It's hours saved on every job that may mean the difference between a successful or unsuccessful bid." ATF will send you a Kelly Clipper Press sheet.

5 COMMERCIAL PRINTING PRESS—"For large profits on difficult printing and finishing requirements, and for the solution of many special problems, investigate the New Era Flat-Bed Web Press."

6 PRESS BLANKETS — Let the International Newspaper Supply Company give you facts on its products.

7 PAPER—"Smart buyers entrust their advertising pieces to good printers, and ask that they be printed on Champion Paper. Champion gets the call because of its greater values." Coupon at bottom of page requires no postage — just drop it in the mailbox.

8 QUICK DRYING INKS — IPI this month offers booklets describing its Vaporin inks. Send for them.

9 NEW OFFSET GUN—"Simpler, easier to operate — has all the proven features of previous guns." ATF offers complete details.

10 OFFSET PRESS — "Let Harris performance increase your pressroom profits." Coupon will bring you interesting reading on offset presses.

11 ROLLERS — "Durability, concentricity, economical, easily washed." Rapid Roller Company offers information on "Tomorrow's Roller Today." Send for it.

12 ROLLERS — Dayton Rubber Company will be glad to send you facts on its renewable surface Dayco Rollers. Use this service.

13 INK — Free information on Zephyr Blacks, "invaluable on rush jobs," will be forwarded to you by the Sinclair & Valentine Ink Company. Use this free service.

Composing Room

14 MATRICE CLEANING — "Quick, efficient, safe, machine method of cleaning matrices in the magazines." Klean-O-Mat offers interesting booklet.

15 LINOTYPE PARTS COMPANY — offers circular on its "improved second elevator bar and distributor box bar." Use the post-card.

16 CUT CEMENT — "Booth's Zinc Cut Cement holds with the grip of a Tiger's paw — saves time in the composing room." Let the E. A. Booth Rubber Company send you full information. Circle this number on the coupon.

17 REBUILT MOLD DISKS — "Patented process substitutes a steel ring in place of broken or cracked iron ring." New catalog offered without obligation. Circle this number on the coupon and mail.

18 MONOTYPE — Interested in Monotype Equipment? Use the coupon to get the information you desire. You are under no obligation.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 2255 (SEC. 510 P. L. & R.) CLEVELAND, OHIO

PRINTING EQUIPMENT *Engineer*

1276 West 3rd Street

Cleveland, Ohio

Use this free service—Keep up to date on Equipment and Supplies

19 LUDLOW TYPOGRAPH — will send illustrated folder describing its new Universal Matrix Cabinet. See ad on page 3. Use the coupon to get folder.

20 PREMAKEREADY EQUIPMENT — Vandercook & Sons will mail you detailed circulars on Hacker & Vandercook equipment. Circle this number on the coupon. No obligation.

21 NEW BENCH SAW — Hammond Machinery Bldrs. states, "The Bench Mercury will rapidly pay for itself at its low price. Five year guarantee." Hammond will send you prices, terms, and literature on this saw.

22 ROUTER AND PLATE CASTER — Hammond Easy-Kaster "8" reduces number of uneven plates — handles easily. R-3 Hammond Router "is both radial and straight-line router — very sensitive." Use the post-card for interesting information on these products. No obligation.

Stereotype Dept.

23 DRY MAT — Flexideal Dry Mat Corporation offers free samples of Flex Dry Mats. Mention gauge, shrink, type of equipment you use.

24 CORK MOLDING BLANKET — "Tru-Mold", states Eastern Newspaper Supply, "gives full depth type bowls and clean, even solids." Circle this number on the coupon for further interesting details.

25 DRY MATS — "Wood Mats reproduce highlight and solid, middletone and halftone with dependable faithfulness to detail." Wood Flong Corporation will be glad to give you interesting material on dry mats.

26 GUMMED BACKING FELT— "Flecto", states Eastern Newspaper Supply, "is successfully used on all types of dry mats." Free samples will gladly be sent.

27 DRY MAT — "For consistent feedability, Certified clarity is a big help." Mail the card for further data. No obligation.

28 ROTARY SHAVER — Let the Stahi Corporation give you up-to-date information on its "Premier" Rotary Shaver.

29 DRY MATS — "The face of Burgess Chrome Mats has the property of permitting the casting metal to release readily, giving a fine stereo."

30 MAT-SCORCHER—American Publishers Supply states, "Form-O-Scorch offers finer results at reduced operation cost." Post card brings you details.

31 SAMPLES of "Superior Glutex" Gummed Backing felt will be sent you by American Publishers Supply. Circle this number on the Post Card.

Miscellaneous

32 BEARINGS — "Selecting SKF Ball Bearings is always an important move towards reduced power, lubrication and replacement costs."

33 PAPER DRILLS — "Produce 200,000 to 600,000 holes per hour accurately, clean cut, and in perfect alignment. Easy operation, fast action drill heads, ball bearing spindles, hollow drills account for this fast, accurate production." Challenge Machinery will send new illustrated catalog, giving full details.

34 INFORMATION — On Imperial Type Metal Company's "Plus Plan" will be forwarded to you. "Gives low dross losses, cleaner impressions, positive metal control."

35 ZINC — "Dependable plates mean better engravings and more work for letterpress." Atlantic Zinc Works will forward you its booklet, "Getting Down to Zinc Facts".

36 LUBRICATION — "There is a Blanchard Pulsolator System for lubricating every type and size of printing press." Bulletin B-30 will be mailed to you promptly.

37 PRINTING EQUIPMENT MOTORS — Kimble Electric Company discusses the modern design of its motors, built especially for the printer, in a booklet which will be mailed to you without obligation. Coupon brings it.

This coupon must be filled out completely in order to secure the literature or information you request. Circle only the numbers in which you are particularly interested.

PRINTING EQUIPMENT *Engineer* January
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

PRINT YOUR NAME AND ADDRESS

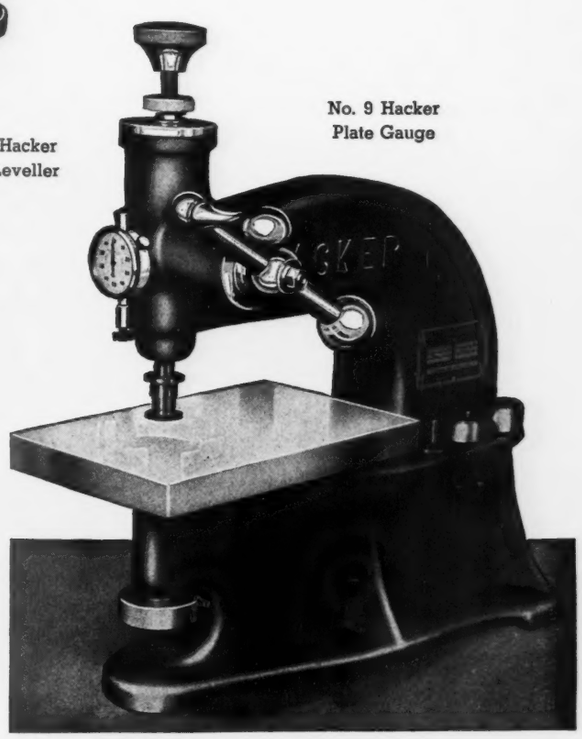
NAME..... TITLE.....DEPT.....

FIRM NAME .....

STREET.....CITY.....STATE.....

More IMPRESSIONS from PRODUCTION PRESSES

No. 4 Hacker
Block Leveller



No. 9 Hacker
Plate Gauge

It is efficient management to make small investments that will increase the production of heavy investment machinery.

The No. 4 Hacker Block Leveller and the No. 9 Hacker Plate Gauge are comparatively small investment equipment, yet they will give you extra weeks of running time from your expensive, high-speed production presses — usually at peak production periods when you need it the most.

The No. 4 Hacker Block Leveller, the No. 9 Hacker Plate Gauge, and some underlay paper are the necessities for careful pre-makeready. For testing printing quality, any Vandercook Proof Press may be used.

With Hacker and Vandercook Premakeready Equipment, experiment and guess are eliminated. Definite micrometer readings permit all plates, both mounted and unmounted to be sent to the pressroom or foundry at the correct height for the best printing or moulding.

Circulars describe in detail Hacker and Vandercook Premakeready Equipment, and how it is used. They will be mailed at your request and without obligation.

VANDERCOOK & SONS

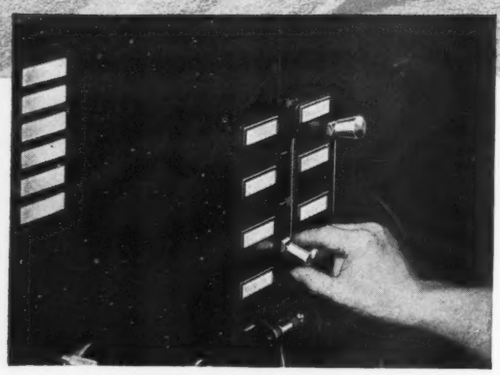
Main Office and Factory
904 North Kilpatrick Avenue, Chicago

Eastern Branch
214 East 45th Street, New York City

CANADA: SEARS LIMITED, TORONTO, MONTREAL, WINNIPEG, VANCOUVER

MIXER or NON-MIXER...

which machine will you need in 1945?



NO-TURN Magazine Shift

Magazines are shifted automatically on the Universal Intertype. The operator simply sets a convenient control knob, as shown in the picture above. Other features are:

1. Convertible—non-mixer or mixer.
2. Combination text and display equipment.
3. Magazines are interchangeable on other Intertypes.
4. Finger-flip changes of type on non-mixer machines.
5. Automatic mixer font selection—or non-mixer font distinguisher.
6. Automatic channel entrance operation.
7. Automatic safety devices.
8. Improved Mat-Traffic Light.

You Don't Know what kind of a line composing machine you will need in 1945—or next year, or in 1950. That's why the new Universal Intertype line composing machine was developed.

The Universal Intertype can be bought today as a NON-MIXER and then, later—at any time in the future—it can be converted into a MIXER. Or a mixer can be converted into a non-mixer. Either conversion can be made in your own composing room—quickly—for only a fraction of the cost of trading out one machine against the other.

Thus Intertype again pioneers with interchangeable, convertible machines—just as we pioneered years ago with the interchangeable, convertible Standardized Intertype.

These are days of constant changes. Look to the future when buying composing machines. Write to Intertype Corporation, Brooklyn, for more details.

NEW UNIVERSAL INTERTYPE

BETON BOLD AND REX